AUGUST 20, 1951 NEWS ISSUE

Electrical World

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Willis Gale, New President of Commonwealth Edison Co, Chicago

Utility Employees Have Own Clubhouse.....Page 16

Production Ups and Downs.....Page 30

1. **"Glad to know you!"** John Torda, General Sales Manager of the Connecticut Spring Corp., Hartford, Conn., is welcomed by W. A. Sredenschek, G-E Manager of Materials and Purchasing. Representative of a small plant typical of more than 90 per cent of G-E suppliers, Mr. Torda finds the door is always open to any manufacturer who can help G.E. build better products.

2. **Business springs from springs:** Referred to T. B. Harold of G-E Control Purchasing group (left), Mr. Torda gets specifications of small springs required for an a-c contactor. Bob Taylor, Control Engineering Division, points out design requirements. Technical assistance given by Engineering Division often helps suppliers meet G-E standards and develop improved production methods.

3. **Co-operation pays off:** Visit to contactor assembly line leads Mr. Torda to suggest a modified spring design for easier assembly. In this case G.E. benefits from supplier's specialized experience.

4. **"Right on the nose!"** Springs submitted by Mr. Torda meet all specifications, result in further orders from other G-E Divisions. Springs for G.E. now are substantial part of company's business.

5. **Pay day!** Starting with only a handful of employees, Connecticut Spring Corp. now uses local armed guard service to distribute pay to 295. Factory space will shortly expand to 31,000 sq. ft.

Case History from Connecticut

Small Hartford, Conn., spring manufacturer is one of 33,000 suppliers and subcontractors who share in expanding business through G-E "open door" procurement policies. Communities everywhere benefit.

Multiplied thousands of times each year, the scenes above tell a graphic story of the way General Electric and other businesses work together, helping to spread prosperity from which everybody gains.

It would be difficult to name one General Electric product that does not depend upon raw materials or component parts purchased from some of the 33,000 G-E suppliers scattered over 48 states. For example, about 2000 different manufacturers, most of them small businesses, process materials and parts for G-E transformers and allied products. More than 200 manufacturers supply items that go into G-E turbine-generators.

In the field of defense production, General Electric has played an important part in the development of subcontracting. For example, almost 300 subcontractors are helping to produce General Electric jet engines.

The electric utility industry, serving communities across the nation, has a real interest in this widespread distribution of General Electric purchasing and manufacturing. In almost every part of the country it contributes to local prosperity and progress. General Electric Co., Schenectady 5, New York.

MORE POWER TO AMERICA

GENERAL ELECTRIC

301-160

The Electrical Week

INDUSTRY MOBILIZATION—(Page 14) How utilities can get CMP materials for service facilities explained . . . House suspends tariffs on lead to boost imports . . . Utilities can order some CMP materials for 1952 . . . Depa names Brandt head of Power Supply Division . . . Appliance makers who have been tardy in filing applications for fourth quarter CMP materials may not get them . . . Form DEPA-6 now has a new job . . . Depa may get more structural steel for fourth quarter use . . . A limited quantity of covered aluminum conductor is available for use by utilities without charge against their aluminum quotas . . . E&TD is preparing directives for power equipment needed to supply Northwest aluminum industry . . . Ken Whitaker, Depa deputy administrator, is in Bethesda Naval Hospital for a check-up.

WASHINGTON—President Truman's hydroelectric program, hacheted in House, is likely to be restored by Senate (p 12) . . . Congress and OPS pricing actions leave equipment and appliance manufacturers with one foot in air (p 12) . . . Interior gives its blessing to Alcoa's lignite-fired smelter in Milam County, Tex. (p 13).

ELSEWHERE—Willis Gale, new president of Commonwealth Edison Co of Chicago, says he won't change the companies long-standing policies (p 4) . . . Lack of metal for equipment makers delays industry's expansion program (p 5) . . . BPA finds Siemens Schuckert circuit breaker passes one test, fails another (p 6) . . . Mediators work furiously to avert copper industry strike (p 13) . . . Arkansas PSC approves controversial co-op station and distribution lines (p 13) . . . Industrial production showing big variations by region and by industry (p 30).

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Latest from Washington—Power plants needed to feed defense industries may be exempt from 60-day moratorium on tax amortization certificates . . . Depa urges utilities to use DO-H-3 rating in ordering other than controlled materials for plant additions. Omission is handicapping manufacturers . . . Truman plans trip to Arkansas in '52 to dedicate Norfolk and Bull Shoals Dams . . . NPA's two electrical divisions are making fourth quarter allotments of materials to manufacturers . . . Senate Finance Committee will vote soon on House-approved tax bill which drops excise tax on sales by investor-owned companies . . . REA chops 49 from engineering and loans staffs when Congress cuts funds . . . Interior used messengers to rush tax amortization pleas for aluminum plants through before deadline.

New Hampshire Public Service Commission becomes Public Utilities Commission Sept. 1. Under new law it will regulate co-ops, also utility construction expenditures affecting capital outlays . . . Water rights acquired by eminent domain are forfeit unless developed in 5 years, except under special dispensation.

Oct. 2 set as tentative date for election to decide whether Tallahassee's new power plant at St. Marks be sold to Florida Power Corp. The $5.5-million plant is in final stages of construction.

Illinois Commerce Commission orders Iowa-Illinois Gas & Electric to show cause Sept. 25 why its electric and gas rates should not be reduced. Company is paying federal excess-profits tax . . . Murfreesboro, Tenn., saves consumers $53,000 by cutting electric rates 11%.

Pennsylvania Power & Light takes option on 445-acre tract, 4 miles north of Martins Creek on the Delaware. First unit of new plant will be 125,000 kw.

Boston will keep its 5,000 gas street lights a bit longer. Boston Edison can't meet 1,500-light changeover this year. Material and personnel both too short.

General Electric will install two-way radio for plant protection at 600-acre Schenectady Works. Net will have 35 base stations at guard positions, 30 mobile in plant police cars and fire trucks.

Westinghouse Electric gets $6.7-million contract to build power-carrying equipment for Paducah, Ky., AEC plant, including 16-million-kva circuit breakers —largest ever constructed for use on 161-kv lines.

Production of primary aluminum in U. S. in first half of 1951 was 807.2-million lb, greatest since first half of 1944 and 18% above corresponding period of 1950, Aluminum Association reports.

Suggestion of the Week—That SEC order immediate distribution by American Power & Light to its stockholders of its entire holdings of Washington Water Power common. This would be welcomed by the people and local public officials of the Northwest and by lovers of private enterprise everywhere.

Inter-American Safety Council elects W. T. Rogers, Ebasco safety consultant, managing director . . . Controllers Institute elects J. V. Colley, president of Dayton Control; Elmer K. Higley, president of Tulsa Control.

Gale Keeps Commonwealth Policies

New Head of Chicago Utility System Satisfied Predecessors Were on "Right Track;" Company Pioneered Engineering Developments

(See Front Cover)

There will be no change in the policies of Commonwealth Edison Co and its associate, Public Service Co of Northern Illinois. This assurance was given "Electrical World" by Willis Gale following his recent election as president of both companies.

Goal Is to Go Forward

The former chief financial officer of the companies expressed a firm conviction that their management has been sound. His goal, he said, would be to go forward in the same manner, following the same basic policies in the hope that with the existing, highly trained, efficient organization he could do as well as his predecessors. They were, Gale said, successful in meeting the widely diversified and expanding requirements of the area served by the system.

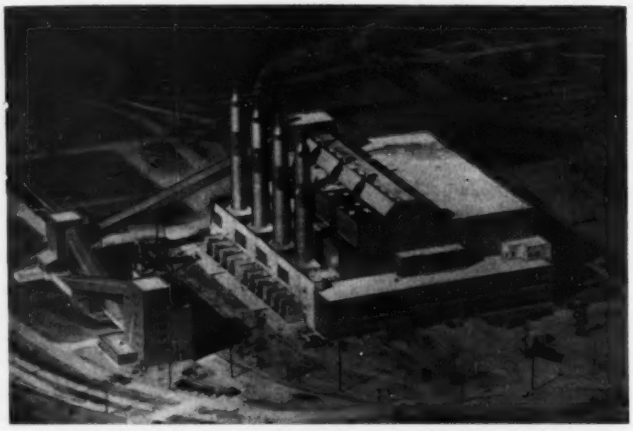
Commonwealth Edison Co, which serves Chicago, goes back to a system started by Thomas A. Edison in 1884. Since then several hundred companies have come and gone. As recently as 1932 there were 77 companies in the overall organization. Consolidation and simplification have reduced these to four major and four minor companies. In addition to Commonwealth and Public Service, the major companies are Chicago District Electric Generating Corp and Chicago & Illinois Midland Railway Co. The former owns and operates State Line Station, one of the system's important sources of power. The railroad transports a large part of coal used by the system.

Company Has Been a Pioneer

On the engineering side Gale will have to move at a lively pace to match the exploits of his predecessors. The company has always been a pioneer in installing new types of equipment and in improving operating practices.

Some of these pioneering achievements included:

1. Early use of rotary converters to boost voltage for "long-distance" transmission.



RIDGELAND STATION has two 150-000-kw units in operation. Foundations are going down for two more. By 1953 station capacity will be 600,000 kw

2. The world's largest storage battery (1898) with a one-hour rating of 1,425 kw for peak load and standby service.

3. First all steam-turbine power plant (Fisk Station) with three 5,000-kw vertical units, an unheard-of size in 1903.

4. The world's largest turbo-generator (1915), 30,000 kw at Northwest Station.

5. A 208,000-kw unit at State Line Station (circa 1930).

6. The cyclone furnace, introduced some years ago with the cooperation of manufacturers. This is particularly adapted to the burning of coal from the Illinois fields. All new system stations have cyclones.

7. The country's first 132--kv oil-filled cable.

8. The isolated-phase type of switchhouse design was originated by system engineers in the '20's. This design is still widely used in the industry.

This pioneering spirit was carried over into other phases of company operations. Around the turn of the century the company was building load by renting light fixtures, electric signs, and street lights. In 1909 it started its own store to sell appliances. Door-to-door selling was pushed from a horse-drawn wagon.

The mobilization program has placed an added burden on the system which is still expanding rapidly to keep ahead of its normal increase in business. Chicago and northern Illinois, served by Public Service, are in a vital industrial area. Large commercial and industrial customers take nearly 50% of the energy sold. In 1950 of 13,280,774,314 kwhr sold these customers took 6,270,241,448 kwhr. Such sales are still increasing.

To meet this demand for power the system has been expanding. Since the war 650,000 kw has been added to the system, and 770,000 kw more has been authorized. When all these units are installed, total capacity will be 3,722,000 kw.

Total customers now number approximately 1.7 million of which some 600,000 are on Public Service lines. Residential customers are increasing in number especially outside of Chicago. They are also using considerably more electricity. In 1946 average annual residential and rural usage was 1,266 kwhr. In 1950 this had increased to 1,720 kwhr.

The expansion program for the

Orders for Electrical Equipment, 1951–1954, as of April 1 and July 1

Capacity Shipped or Scheduled	1951		1952		1953		1954		Increase in Orders
	April	July	April	July	April	July	April	July	
LARGE STEAM TURBINE-GENERATORS (10,000 Kw and Larger)[1]									
For U. S. Utilities	5,124,500	4,749,500*	8,502,000	8,746,500	8,113,500	9,166,000	1,208,500	2,206,000	1,979,500
For U. S. Industrials	430,000	400,000*	750,000	956,500	140,000	230,000	.....	40,000	306,500
For Outside Continental U. S.	920,000	870,000*	170,000	200,000	120,000	270,000	30,000	170,000	270,000
Total	6,474,500	6,019,500*	9,422,000	9,903,000	8,373,500	9,666,000	1,238,500	2,416,000	2,556,000
SMALL STEAM TURBINE-GENERATORS (4,000 Kw and Larger)[1]									
For U. S. Utilities	163,500	197,000	58,000	110,000	.....	7,500	.....	.....	93,000
For U. S. Industrials	246,500	256,100	169,500	204,000	.....	.....	.....	.....	44,100
For Outside Continental U. S.	109,000	89,000	102,000	75,000	5,000	.....	.....	.....	.....
Total	519,000	542,100	329,500	389,000	5,000	7,500	.....	.....	137,100
WATER-WHEEL GENERATORS (4,000 Kw and Larger)[1]									
For U. S. Utilities	1,282,600	1,282,500	1,807,100	1,808,200	874,200	1,159,300	572,500	594,900	301,700
For U. S. Industrials	.....	.....	26,200	26,200	.....	.....	.....	.....	.....
For Outside Continental U. S.	440,600	437,400	214,400	234,200	10,200	41,600	.....	.....	48,000
Total	1,723,200	1,719,900	2,047,700	2,068,600	884,400	1,200,900	572,500	594,900	349,700
STEAM GENERATORS (450 psi Pressure and Higher)[2]									
For U. S. Utilities	69,040	69,040**	89,582	88,919	9,620	21,700	.....	.....	18,417
For U. S. Industrials	21,699	21,699**	9,246	22,274	.....	.....	.....	.....	13,028
For Outside Continental U. S.	16,117	16,117**	3,551	4,973	.....	.....	.....	.....	1,422
Total	99,856	99,856**	95,379	116,166	9,620	21,700	.....	.....	32,867
POWER TRANSFORMERS (501 Kva and Larger)[3]									
For U. S. Utilities and Industrials	38,633,000	39,808,000**	29,399,000	41,059,000	6,652,000	12,759,000	816,000	958,000	19,084,000
For Outside Continental U. S.	2,611,000	2,542,000**	1,292,000	1,709,000	65,000	565,000	28,000	30,000	850,000
Total	41,244,000	42,350,000	30,691,000	42,768,000	6,717,000	13,324,000	844,000	988,000	19,934,000

* Manufacturers have rescheduled shipments of delayed machines for 1952. ** Estimated loss of production for 1951 has not been deducted.
[1] Figures in kilowatts. [2] Figures in 1,000 lb of steam per hour. [3] Figures in kilovolt amperes.

1951-54 period will cost the company $450 million. More than $350 million of this will go for the electric system. The remainder will go for expanding the gas system.

Financially the company has been progressing as rapidly as it has been physically. The increases since 1946:

	1946	1950
Operating revenues	$196,003,381	$271,423,945
Electric revenues	175,821,877	239,335,831
Net income	26,275,646	29,129,284
Earnings per share	1.91	2.12

Gale is right at home in the financial department. He is a lawyer and certified public accountant. He was with North American Light & Power Co from 1928 to 1937. He started as an accountant, advancing to assistant treasurer and vice president. When he joined Commonwealth Edison in 1937, it was as financial vice president. Later his title was changed to chairman of the finance committee.

No Metal for Equipment Makers Delays Industry's Expansion Plan

There's trouble ahead for the electric utility industry. It is approaching fast, will certainly be here in the fourth quarter, and will stay with the industry all of 1952 and maybe longer.

Cause of the trouble is the expansion program. The industry is ordering equipment faster than the manufacturers can supply it, and the manufacturers are using materials faster than the defense agencies can allocate them.

The result is that at the end of 1952 capability of the country's power systems will be from 2 million to 4 million kw less than scheduled.

The remedy is for the defense agencies to find more metals to allocate to the equipment makers. They have the production capacity. All they need is the metal.

This is the industry picture painted by the Electric Power Survey Committee of Edison Electric Institute. The committee which makes semi-annual surveys, the last as of April 1, made an interim report as of July 1 because of the difficulties encountered by utilities in meeting construction schedules. As usual the equipment manufacturers cooperated.

Slowdown in equipment shipments was not unexpected by the committee. In its last survey the committee said that production schedules had been set up on the basis that required materials would be available as needed to carry out the manufacturing processes

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in an orderly manner. The materials aren't being made available. What is more Defense Production Authority has cut allotments for the fourth quarter. No one will promise any improvement in 1952. This can only mean delays in construction and trouble for the industry.

Production of equipment has been falling behind in varying degrees. Some items may be six months late. There will be some delay this year, but next year the delays will become longer and more serious. Here is the situation with regard to various types of equipment:

Steam Turbine-Generators — Shipments during 1951 will fall short of schedules by about 500,000 kw.

Steam generators—Shipments during 1951 will be behind 16 million lb per hour.

Hydraulic Turbines and Waterwheel Generators—These are on schedule but will fall behind in 1952.

Power Transformers—These will be behind by 5 million kva in 1951.

Other Equipment — All auxiliary equipment is delayed. Switchgear, motors, pumps, heaters, wire, pipe, and cable are among the more important of these items.

Steel (structural shapes) is slowing construction of plants, substations, and tower lines. Unless more steel is available in the fourth quarter more than 30 projects will be delayed. These in turn will delay still more projects in 1952.

In the meantime manufacturers have been getting more orders than they have been shipping (See table). This means schedules for the coming years will be heavier. But again these schedules will mean nothing unless the manufacturers can get sufficient allotments of metals.

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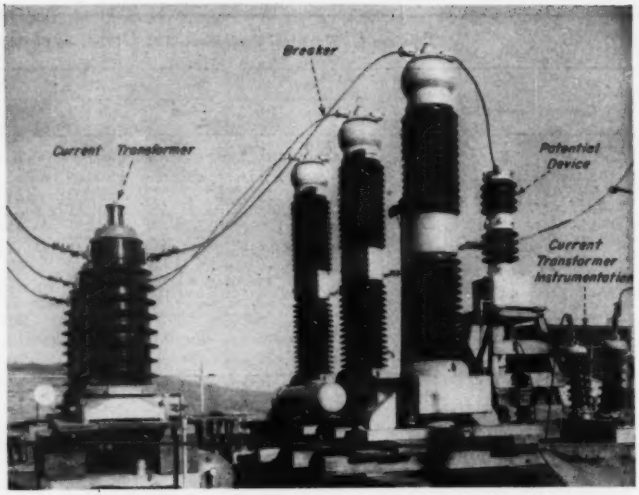
Dr Condon Leaves NBS to Join Corning Glass

Dr Edward U. Condon, nuclear physicist, has resigned as director of the National Bureau of Standards, effective Sept. 30, to join Corning Glass Works as director of research and development.

NBS announced that Nicholas E. Golovin has been appointed assistant director for administration. No successor has as yet been named for Dr Condon.



SIEMENS SCHUCKERT oil circuit breaker tested at Bonneville's Spokane substation

BPA Finds a New Circuit Breaker Passes One Test but Fails Another

Siemens Schuckert's new type, low oil-content circuit breaker will clear all faults in 3.3 cycles. But it does not meet the requirements of no restrikes when interrupting charging current on short lengths of 115-kv line.

These were results of tests conducted last month at the Spokane substation of Bonneville Power Administration.

Single-phase arcing faults from 77,000 kva to 2,830 Mva, symmetrical, were interrupted successfully in 3.3 cycles during switch operations which included open-close-open, close-open and open. Three-phase ungrounded solid faults of 700 amp, symmetrical, were interrupted successfully during close-open operations.

This new breaker, built in the Western Zone of Germany, represents another step toward economy of operation and decrease in fire hazard by eliminating the large quantities of oil required in conventional high-voltage circuit breakers. The unit is designed to smother the arc with a minimum amount of oil.

Known as the minimum oil expansion circuit breaker H 630/110, it is rated 2,500-Mva interrupting capacity, 115 kv, 600 amp, with a minimum rated reclosing time of 12 cycles and a fault duration of three cycles. It has one pole per phase, with interruption chamber and arc contacts located in the hollow insulator stacks. Compressed air is used to open the contacts.

During the tests breaker contacts were opened at different points on the current wave to obtain a major loop of current just before interruption of fault current. This was done to impose the maximum available interrupting duty (about 2,800 Mva symmetrical) on the breaker. Four tests were made on 83 miles of single line. Three tests were made on 250 miles of single line, formed by paralleling the three conductors at Spokane and energizing them through one pole of the breaker.

Dielectric strength of the breaker oil remained unchanged at 30 kv per 0.1 in. during the entire test, even though the oil darkened from carbonization. Contact tips and fixed contacts were not changed during the tests. Migration of material was very small. Although the moving contact was slightly burned at its tip, the surface that made contact in the closed position was clean. Voltage drop between breaker terminals after the tests showed a drop of 27 mv at 100 amp.

Another Example of L-M Leadership

L-M's ORTO

(*oxidation-resistant transformer oil*)

gives you all these advantages:

- longer life for the transformer, with the same overload capacity, or . . .
- higher overload capacity with the same transformer life
- reduced oil acidity and sludging
- maintained high impulse strength

and

- ORTO mixes with any other oil, conventional or inhibited
- ORTO will not react with other inhibitors
- ORTO is available as a *concentrate* for adding to your present oil stocks, for adding to power transformer oils, and for prolonging the life of reclaimed oil

Since its announcement, which led the industry, ORTO® has been a phenomenal success. Naturally L-M and L-M research engineers are gratified by ORTO's acceptance and this acceptance was deserved, by the long, rigorous careful checking into oils and inhibitors. New accelerated test methods were developed, to make sure that ORTO was as good as expected. ORTO was thoroughly tested and proved by extensive investigation and accelerated life tests representing many years of service.

Comparative curves show the deterioration of transformer oil in service. A high-grade conventional oil deteriorates at a gradually accelerating rate. Over-refined oils may have a better response to the inhibitor; but once the inhibitor has been used up, the oil has little resistance to oxidation, and deteriorates rapidly. ORTO brand oil is a high-grade conventional oil with an inhibitor which greatly extends the beginning of the deterioration, which, when it finally starts, assumes the same gradual curve as with any high-grade conventional oil.

Ask the L-M Field Engineer for information on ORTO; or write Line Material Company, Transformer Division, Zanesville, Ohio (a McGraw Electric Company Division).

LINE MATERIAL . . . Transformers

Complete Coordinated Equipment for Distribution Today

Study of transformers shows more forced cooling in the higher kva ratings

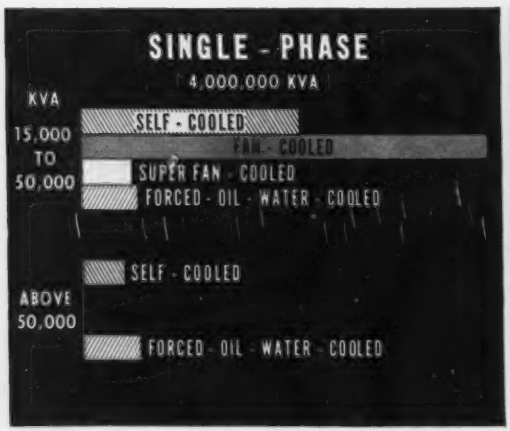
General Electric has recently completed an analysis of approximately fifteen million kva of power transformers, rated 15,000 kva and above.

From this study three trends stand out. First, kva ratings are still climbing, with units as high as 145,000-kva already built and even larger ones being considered. Second, *three* 3-phase units are now being built for every *one* single-phase, as compared to 1940 when there were more orders for single-phase units than for 3-phase. Finally, there is a pronounced trend toward forced cooling, particularly in the higher kva sizes.

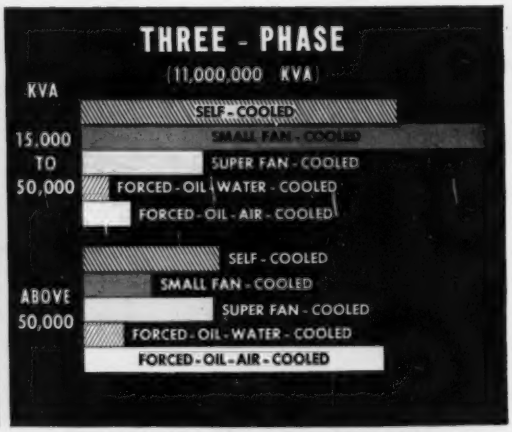
This last trend is particularly important because it indicates that a lot more thought is now being given to the economics of cooling than in the past. Today, with at least six types of cooling to choose from, an intelligent analysis of each installation (see opposite page) is necessary if lowest overall costs are to be achieved.

With unequaled experience in building all types of cooling, General Electric is ready and able to provide you with the most economical transformer for your particular application. You can take advantage of this experience by consulting with your G.E. representative before you buy your next power transformer.

This is the way transformer purchases now divide in respect to types of cooling



NO LONGER IS SELF-COOLING DOMINANT. Below 50,000 kva, half of all new single-phase transformers are fan cooled while another 5% are super-fan cooled. Including units above 50,000 kva, about 13% are forced-oil-water-cooled.


THREE - PHASE
(11,000,000 KVA)
KVA
15,000 TO 50,000
SELF - COOLED
SMALL FAN - COOLED
SUPER FAN - COOLED
FORCED - OIL - WATER - COOLED
FORCED - OIL - AIR - COOLED
ABOVE 50,000
SELF - COOLED
SMALL FAN - COOLED
SUPER FAN - COOLED
FORCED - OIL - WATER - COOLED
FORCED - OIL - AIR - COOLED

IN 3-PHASE TRANSFORMERS, super-fan cooling is definitely on the increase, and now accounts for 23% of the total. Most startling is that 40% of all units above 50,000 kva are now forced-oil-air-cooled.

Type of Cooling*	First Cost (in per cent)	Impedance (OA = 1)	Core Loss (OA = 1)	Copper Loss (OA = 1)
Self-cooled (OA)	100	1.0	1.0	1.0
Fan-cooled (OA/FA)	91	1.25	0.85	1.35
Water-cooled (OW)	85	1.0	1.0	1.0
Super-fan cooled (OA/FA/FA)	80	1.67	0.75	2.1
Forced-oil-air cooled (FOA)	75	1.5	0.8	2.0
Forced-oil-water cooled (FOW)	70	1.5	0.8	2.0

Note: Approximate figures above are based on a 50,000 kva, 138-kv transformer.
* Substation units are usually types OA, OA/FA or OA/FA/FA. Generating station units are usually FOA or FOW.

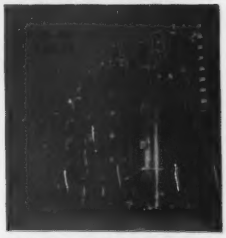
These are the considerations affecting the choice of transformer cooling

FIRST COSTS—In the table above, different types of cooling are arranged in descending order of first costs. *Relative* first costs will generally fall in this same order for units 50,000 kva and higher.

IMPEDANCES—Minimum standard impedances for FOA and FOW transformers are nearly 50% higher than for self-cooled units. However, this is generally a minor problem at step-up stations where losses have minimum cost and where voltage drop can be compensated for by modern generators.

LOSSES—To first cost must be added both the expense of supplying energy losses (copper and iron), and the amount of lost revenue which results from having to supply these energy losses. The total loss can be capitalized and added directly to first cost, or can be computed on an annual basis and added to yearly carrying charges.

INSTALLATION COSTS—These must be added to above costs, but will vary widely with conditions at the site. Generally, minimum installation cost is achieved with FOA transformers. All General Electric transformers are shipped in an *upright* position—a factor which greatly facilitates installation.



A Special Look at the Super-Fan-Cooled Transformer

This comparative newcomer, with its three separate ratings, is fast increasing in popularity. Its first cost is between the self-cooled and forced-oil types—so it is the least expensive transformer if you want to avoid oil pumps. It can be purchased without fans where future load growth cannot be predicted—and fans added as necessary. Finally, the industry seems to favor the super-fan-cooled transformer for unattended areas, probably because it has at all times a self-cooled rating.

Through the courtesy of American Institute of Electrical Engineers, we have reprinted an article, "The Choice of Main Power Transformers for Generating Stations," which is pertinent to this whole question. Ask for GET-2225. Write to Apparatus Department, General Electric Company, Schenectady 5, New York.

401-15

GENERAL ELECTRIC

C-E REHEAT BOILERS

ALBANY STEAM STATION

NIAGARA MOHAWK POWER CORPORATION

THE C-E Unit, shown at the right, is one of three duplicate steam generating units now in process of fabrication for the new Albany Station of the Niagara Mohawk Power Corporation.

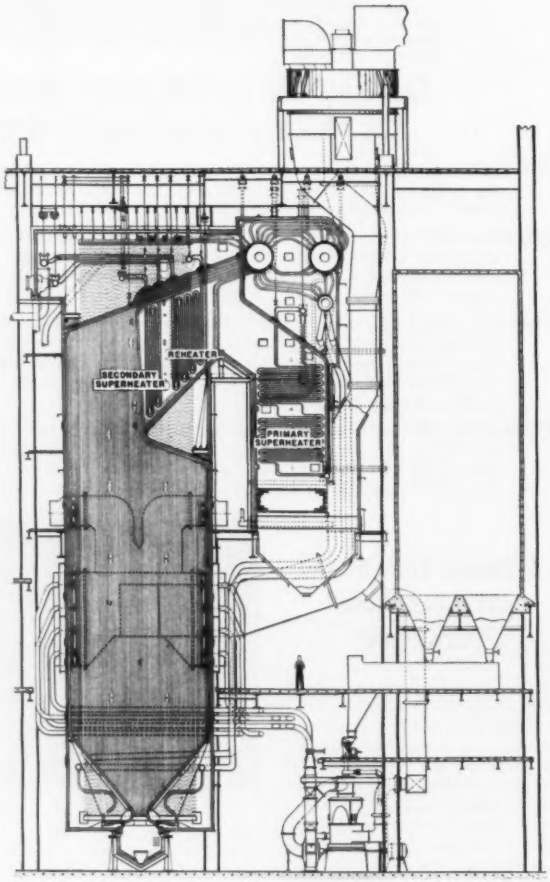
Each of these units will serve a 100,000 kw turbine generator operating at a throttle pressure of 1450 psi and a temperature of 1000 F, reheated to 1000 F.

The units are of the radiant type with a reheater section located between the primary and secondary superheater surface. A finned tube economizer is located below the rear superheater section, and regenerative air heaters follow the economizer surface.

The furnaces are fully water cooled, using closely spaced plain tubes throughout. They are of the basket-bottom type, discharging to sluicing ash hoppers.

Pulverized coal firing is employed, using bowl mills and vertically-adjustable, tangential burners.

B-516



C-E

COMBUSTION ENGINEERING—SUPERHEATER, INC.

200 Madison Avenue • New York 16, N. Y.

ALL TYPES OF BOILERS, FURNACES, PULVERIZED FUEL SYSTEMS AND STOKERS; ALSO SUPERHEATERS, ECONOMIZERS AND AIR HEATERS

BPA, 5 Utilities Discuss Long-Standing Disputes

Conferences to resolve several long-standing contract disputes are now being held between Bonneville Power Administration and five privately owned utilities operating in Oregon and Washington.

Companies engaged are Portland General Electric, Pacific Power & Light, Puget Sound Power & Light, Washington Water Power, and Mountain States Power.

Main Points Listed

Paul J. Raver, Bonneville administrator, listed these main points under discussion:

1. The fact that Bonneville administration gives preferential treatment to public power bodies. The private utilities have long disagreed with Bonneville's interpretation of the law on this preference.

2. The objection of private utilities to Bonneville's control over resale rates charged by private utilities.

3. The fact that private utilities have not been able to get long-term contracts from Bonneville. BPA has maintained that it has not had sufficient power supply to guarantee large blocks to private utilities.

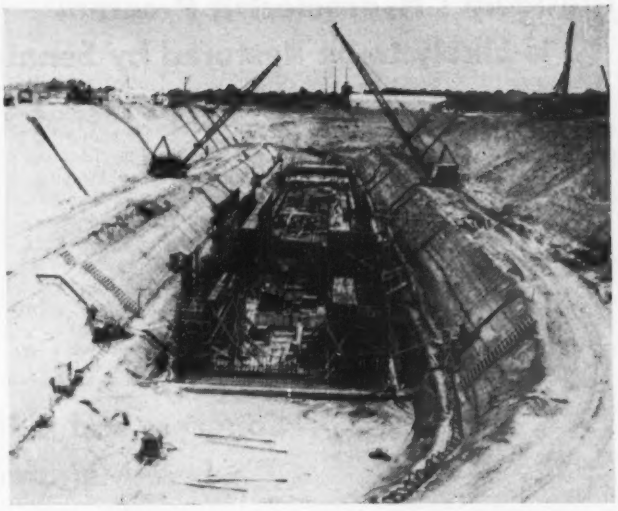
In the present discussions Bonneville is giving ear to these objections and has drawn up a proposed contract which modifies terms of present contracts in several important particulars.

5-Year Contract Proposed

Instead of the one-year contracts for interruptible power under which the private utilities now operate, the proposed contract provides for a five-year power contract to be supplemented by yearly schedules based on needs of the companies and the ability of BPA to deliver after preferential obligations have been met.

No privileges are taken away from Bonneville's preferred customers, PUD's, and industries having firm power commitments, BPA contends. At the same time the contract is designed to put private utilities on an orderly, continuing basis, giving them a fair share of increased hydro power as new federal projects now being built or to be built in the future are put into production.

Present contracts will expire Sept. 30.



Electric Energy's Joppa Plant . . .

Runs Apace with TVA's Shawnee

Despite intermittent strikes, construction has gone on at a good pace at TVA's Shawnee Plant and Electric Energy Inc's Joppa Plant on opposite sides of the Ohio River west of Paducah, Ky. Both stations, each of which will produce more than 600,000 kw, will provide power for an Atomic Energy Commission plant being built at Paducah (EW, July 2, p 58).

Picture of EEI installation shows the turbine bay, looking north. That of TVA construction (below), looks northwest over the powerhouse area.

Westinghouse Electric Corp announced last week it had received a $6.7 million contract to build equipment for the Paducah plant to control power from the two steam generating stations.

President's Hydroelectric Program Is Likely to be Restored by Senate

The Senate last week appeared certain to go along with its Appropriations Committee in restoring President Truman's hydroelectric power program, which had been cut by the House.

Despite efforts of individual Senators to "cut the fat" from the $621,160,213 rivers, harbors, and flood control program recommended by the Senate committee, the majority seemed content to let it ride.

Heeding the cries for more electric power in the Pacific Northwest and the Tennessee Valley area, the committee had recommended a $122,777,000 increase in House figures. It had also sought to rescind the House-approved ban on starting new projects or resuming old ones.

Program-wise, the Senate group restored the Bonneville Power Administration projects, making these changes:

McNary Dam and Lock, increased from $36 to $43 million; Detroit Reservoir from $15 to $17 million; Dexter Reregulating Dam at Lookout Point from $15 to $16 million.

Three projects in the area, cut out completely by the House, were restored by the Senate Committee: The Dalles Dam and Lock, $14 million; Ice Harbor Dam and Lock, $4 million; and Albeni Falls Reservoir, $10 million.

Two projects in the Tennessee Valley area were restored by the committee: Cheatham Dam and Lock, $3 million, and Old Hickory Dam and Lock, $6 million.

The Buford Dam in Georgia was restored with $900,000 and the Buggs Island Dam in Virginia and North Carolina received an increase of $1 million to bring it up to $17 million.

2 Arizona Substations Destroyed by Lightning

A violent thunderstorm in the Tucson, Ariz., area recently destroyed two new substations erected by the Tucson Gas, Electric Light & Power Co.

Lightning hit the facilities, part of the utility's new 44-kv power loop to increase capacity and regulate voltage in the Tucson district. Construction costs during the past year have totaled $443,379.

Utility officials said it may require more than a year to replace destroyed equipment.

Congress and OPS Pricing Actions Leave Manufacturers Up in the Air

Recent actions of Congress and the Office of Price Stabilization have left appliance and equipment makers with one foot in the air. They don't know which, if any, of the tailored orders put out by OPS are still valid. Or when a business can begin to apply the looser ceilings prescribed by the Capehart Amendment.

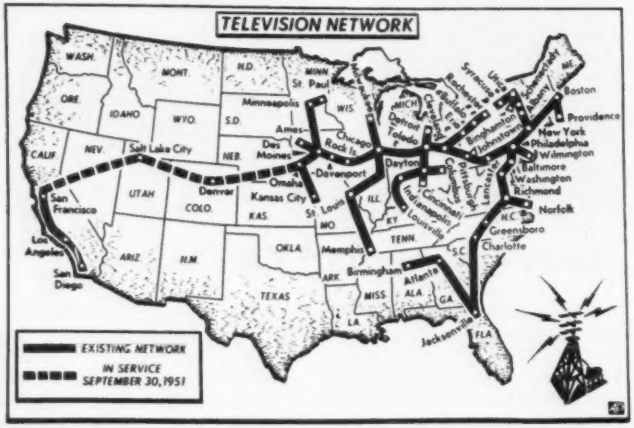
For the time being, they must price under one of two regulations: The General Ceiling Price Regulation (last January's freeze) or the old Ceiling Price Regulation—22 for appliance makers, 30 for equipment makers.

Now all a business need do is figure out which of the two regulations will give it the better deal. If GCPR does, the firm need do nothing but continue to use the Dec. 19-Jan. 25 price. If CPR does, then an OPS Form 8 must be filed. If there is no objection from the agency within 15 days, the increases can be put into effect.

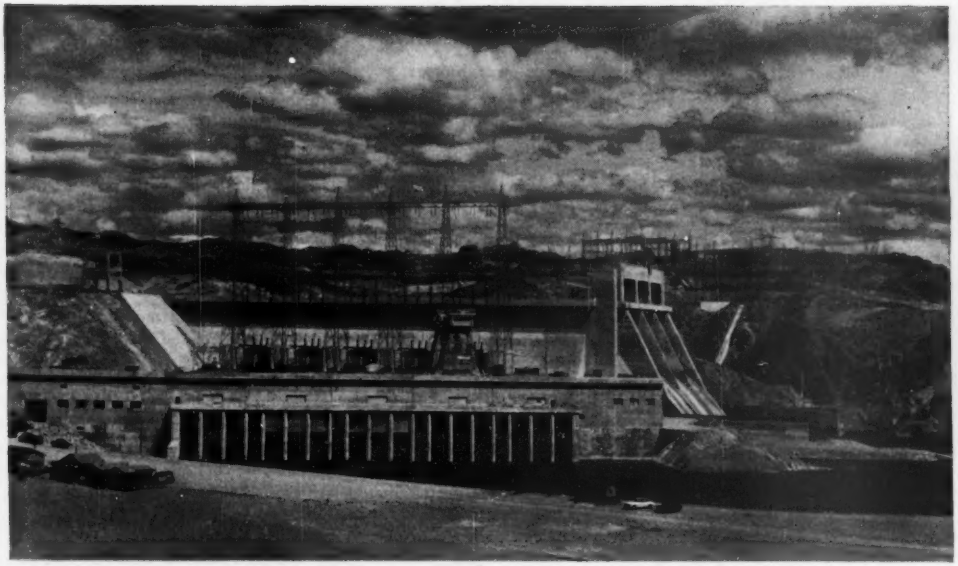
This option doesn't hold for a manufacturer who has already begun to price under CPR-22 or 30. Once a new price is adopted—even a rollback—he must stick to it. Note this, however: Merely filing a Form 8 does not constitute pricing; unless the manufacturer has actually offered or sold goods at the new price, he is still free to return to the GCPR level.

Pricing under the two existing regulations is only temporary. The Capehart Amendment provides for relief to businesses "upon application and a proper showing . . . of prices and costs." Granting of such relief is mandatory. OPS must then adjust ceilings to reflect cost changes, including overhead, advertising, and selling, up to July 26, instead of March 15, as provided under the older regulation.

A new set of manufacturers' regulations is coming—to replace CPR-22, CPR-30, and the other tailored orders. Base periods, cut-off dates, and allowable costs will be changed to conform with Capehart's Amendment.



CROSS-COUNTRY TV is in the offing. Map charts existing video network (solid black lines) and new link-up (dotted line) that will inaugurate transcontinental transmission on Sept. 30. Link is part of American Telephone & Telegraph Co's $40 million microwave radio-relay system between New York and San Francisco



DAVIS DAM, on Colorado River 67 miles below Hoover, is almost complete, with four of its five units already on the line. Fifth will go into operation this year, five years after dam was begun. Low structure with piers is the installation's power house

Mediators Try to Avert Copper Industry Strike

The government was working furiously last week to avert an industry strike in copper mines scheduled for Aug. 27.

If the strike is called, about 90% of domestic copper production will be cut off. The Federal Mediation and Conciliation Service hoped to delay the strike so that it would have more time to effect a settlement.

The month-long (July) strike of CIO United Steelworkers at American Smelting & Refining Co's smelter at Garfield, Utah, cost some 24,000 tons of copper. This dispute, mainly over wages, is now before the Wage Stabilization Board for recommendations.

The Aug. 27 deadline was set by Mine, Mill, and Smelter Workers, ex-CIO, and 11 AFL Metal Trades unions. Targets are AS&R, Kennecott Copper Corp, Anaconda Copper Mining Co, Phelps-Dodge Copper Co, and other major producers.

The main issue in dispute is higher wages. Demands of all the unions are in excess of what the government's wage stabilization policy will allow.

Phelps-Dodge recently settled with USW at Laurel Hill, L. I., for wages 15% above January, 1950. A 10¢-increase was granted by the company and most of the industry last summer. To this P-D added 11.75¢ more, 5¢ of it in a general increase, the rest in fringe benefits.

•

Arkansas PSC Approves Disputed Co-op Station

Construction of a $10,500,000 co-op steam plant and transmission system for northwest Arkansas has been approved by Arkansas Public Service Commission.

The commission divided two to one in granting a certificate of necessity to Arkansas Electric Co-operative Corporation to build the plant at Ozark, Ark.

The order climaxed one of the longest and most controversial cases ever to come before the commission. Hearings began last January and continued intermittently through Aug. 3.

AECC, composed of three rural co-operatives, had asked for authority to construct a 30,000-kw plant at Ozark to supply power to its distributing agencies. The rural cooperatives are Arkansas Valley Electric at Ozark, Carroll Electric at Berryville, and Ozark Rural Electric of Fayetteville.

Arkansas Power & Light Co of Little Rock, Southwestern Gas & Electric Co of Shreveport, Arkansas-Missouri Power Corp of Blytheville, and the Oklahoma Gas & Electric Co opposed the application.

The United Mine Workers and the International Brotherhood of Electric Workers, AFL, intervened to oppose granting of the certificate.

The opponents contended the proposed transmission system duplicates power lines now established in the area by the private companies.

•

Lignite-Fired Smelter Gets Interior Approval

Interior Department has recommended a certificate of necessity be issued to Aluminum Co of America for construction of the world's first lignite-fueled aluminum smelter, in Milan County, Tex.

The certificate, which provides for accelerated tax amortization of the facility, would be granted by Defense Production Administration. Texas Power & Light Co will build and operate the power plant for Alcoa.

How Electric Utilities Can Obtain CMP Materials

For service facilities such as garages, warehouses, and office buildings

Step 1—If requirements for a project amount to less than two tons of steel, 2,000 lb of copper, and no aluminum is needed, the project may be self-certified. In such case, the utility is authorized to use the allotment symbol "U-8" on purchase orders for the needed materials.

Step 2—If requirements are more than these amounts, then the utility must file Form 4-C with the nearest field office of the Department of Commerce, asking for approval by the National Production Authority.

Step 3—If application is approved, NPA will authorize the project, make a material allotment, and assign allotment symbol "U-8" to be used on purchase orders for the required materials.

This procedure is effective for orders to be delivered after Sept. 1.

House Suspends Tariffs on Lead to Boost Imports

In an effort to step up imports, the House has voted to suspend tariffs on lead until the present emergency is over or until prices of imported lead become so low as to threaten domestic output. The Senate must still act on the measure.

Under provisions of the Tariff Act, the duty on lead in bulk form would be 2⅛¢ a lb and in ore form, 1½¢ a lb. However, in most cases these rates are cut in half by reciprocal trade agreements now in effect between the U. S. and Canada. Tariffs on scrap lead have previously been suspended by Congressional action and are not slated to be reimposed before mid-1952.

•

Revised DEPA-6 Issued

Revised Form DEPA-6 is to be used to return the unused portion of controlled material allotments made for major plant additions. In the past, the form has been used to report the disposition of the allotments, and the unused portion has been returned by letter. The revised form is used for both purposes and must be returned to Defense Electric Power Administration within the 30 days following an authorization by the agency.

•

Depa May Get More Steel

Defense Electric Power Administration officials are optimistic that their quota of 105,000 tons of structural steel for fourth quarter use will be increased. Defense Production Authority, which cuts the materials pie, has been studying Depa's appeals for a supplementary allotment.

•

Tardy Appliance Firms May Get No CMP Metals

Makers of consumer durable goods including a lot in the electrical appliance fields are going to find it difficult to get CMP materials for the fourth quarter. The manufacturers affected are those who ignored National Production Authority's request to file applications for steel, aluminum, and copper. To get materials, the tardy ones will have to compete with those who have CMP-approved orders. The latter have priority.

NPA may relent and give late applicants allotments. But even then they may lose so much time placing their orders that they won't get the materials until after their plants are down.

'Free' Aluminum Available

A limited quantity of covered aluminum conductor is available for use by utilities without charge against their aluminum quotas, Defense Electric Power Administration has announced. If this can be used in connection with minor requirements, utilities are asked to appeal to Depa under procedures set forth in Section 43 of Order M-50.

Utilities Can Order Some CMP Materials for 1952

Electric utilities have been authorized by Defense Electric Power Administration to place controlled material orders for minor requirements for the next four quarters.

Actual fourth quarter allotments and advance allotments for the first three quarters of next year were sent to all utilities with the letter of authorization. Allotments were determined by use during 1950, the base period for minor requirements quotas.

In making the authorization Depa said orders should be placed as far in advance as construction plans permit for delivery as needed. The agency again reminded utilities to use the DO-H-4 rating on purchase orders for non-controlled materials as well as for "A" and "B" products.

•

Depa Names Brandt Head of Power Supply Division

Robert Brandt, New England Power Co, is new director of Defense Electric Power Administration's Power Supply Division, succeeding R. Frank Brower.

A native Bostonian, Brandt has been serving as chief of Depa's Coordination and Planning Branch since late June.

Brower, on loan from Consolidated Edison, will serve temporarily as a consultant to Depa Administrator James F. Fairman before returning to his position with the utility.

•

Push for Northwest Power

The Engine and Turbine Division of the National Production Authority is about ready to issue directives for heavy equipment for power plants to serve the aluminum industry. First are likely to go to Pacific Northwest power suppliers.

•

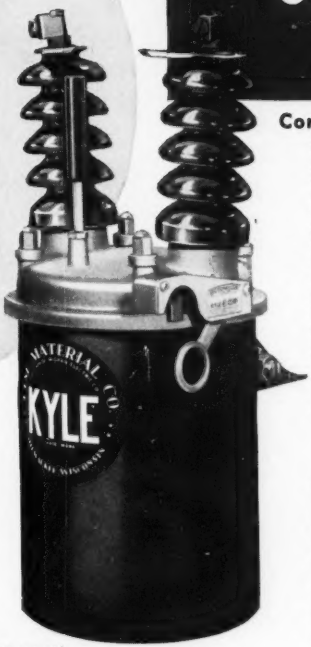
Whitaker in Hospital

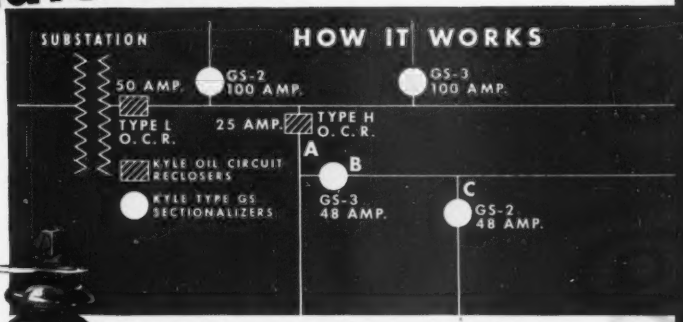
Ken G. Whitaker, deputy administrator of the Defense Electric Power Administration, is at Bethesda Naval Hospital undergoing medical examination. He is able to receive visitors and keep in touch with his Washington office.

How to make rural line protection fully automatic...

KYLE

type GS automatic oil sectionalizers





Completely automatic from substation to branch

Sectionalizers coordinate with reclosers to isolate branch lines on permanent faults. They are not current-interrupting devices. They open only while the recloser contacts are open. They are pre-set to lock out after the first, second, or third operation of the recloser.

In the diagram, A is the recloser. B is a Kyle sectionalizer set to open during the *third* operation of the recloser (indicated by GS-3). C is set to open after the *second* operation of the recloser. If a fault occurs beyond C, recloser A operates. If the fault doesn't clear on the first operation, the recloser opens again, and Sectionalizer C opens, isolating the tap. Then the recloser re-energizes the rest of the branch.

If a fault occurs *between* B and C, Sectionalizer C does not operate. But if the fault has not cleared by the third operation of the recloser, Sectionalizer B opens, isolating that branch. The recloser then re-energizes the rest of the line.

Other branches are also protected by Kyle sectionalizers which are opened by the 50-amp type L recloser at the substation.

ALL THE KYLE SAFETY FEATURES

Tank, cover, and operating handle electrically dead. Tank may be grounded. Mechanism cooled, and insulated from tank, by transformer oil. Trip-free operating handle—cannot impart a blow to operator.

RATINGS

Seven sizes, with minimum tripping currents 8 to 100 amps to coordinate with reclosers rated from 3 to 100 amps. Maximum operating currents 150 to 2000 amps, 2.4 to 15 kv. Weight with oil about 25 pounds. Crossarm or direct pole mounting.

ISOLATES permanent faults on branch lines...

COORDINATES with any make or type of recloser...

COSTS LESS to operate than fuses...

The Kyle type GS sectionalizer opens only on permanent faults that the recloser cannot clear; it provides completely automatic protection and positive coordination by eliminating the human element in installing the correct fuse; and while the GS costs more than a single-shot cutout, it saves far more than the difference, in time and service calls.

Because sectionalizers do not interrupt current, there is no arc to wear contacts or cause oil contamination. Sectionalizers cannot be used independently, but only with reclosers—of *any* make or type.

Ratings are changed in the field by replacing the trip coil. Lockouts are pre-set by changing the lockout adjustment pin—a matter of a few minutes. After a permanent fault has been corrected, the sectionalizer is manually reset with the operating handle.

Get the Whole Story

Ask the L-M Field Engineer to explain complete, automatic protection, and to give you a copy of Sectionalizer Bulletin CR3. Or write Line Material Company, Milwaukee 1, Wisconsin (a McGraw Electric Company Division).

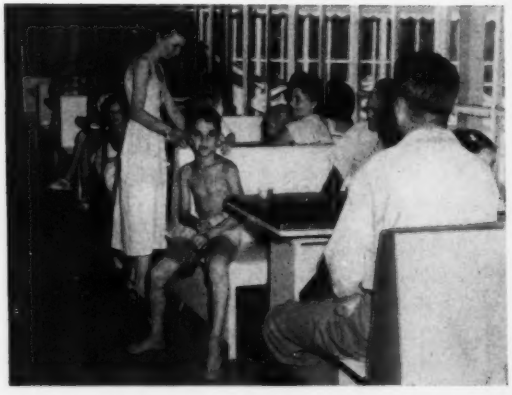
LINE MATERIAL... Kyle Sectionalizers

THE CLUBHOUSE on Sullivan's Island as one sees it from the landside. At rear is a large bathing beach

SPENDING THEIR TIME at the bar, these young ladies find that cok

Utility Employees Have Own Clubhouse

When it comes to social life, the employees of South Carolina Electric & Gas Co employees have it. They have it at their own Employees Club house, and much of their enjoyment comes from the fact that it is their own. They did most of the work that made the clubhouse one of the most attractive of its kind anywhere in the United States. The house originally was the officers' club at Fort Moultrie, near Charleston. It cost the company $27,500. The site was excellent, but the building was a ramshackle. Then from all departments came men and women, some with skill and some with only willingness to work. In a few months they reconstructed the building. The pictures show how they are enjoying it.



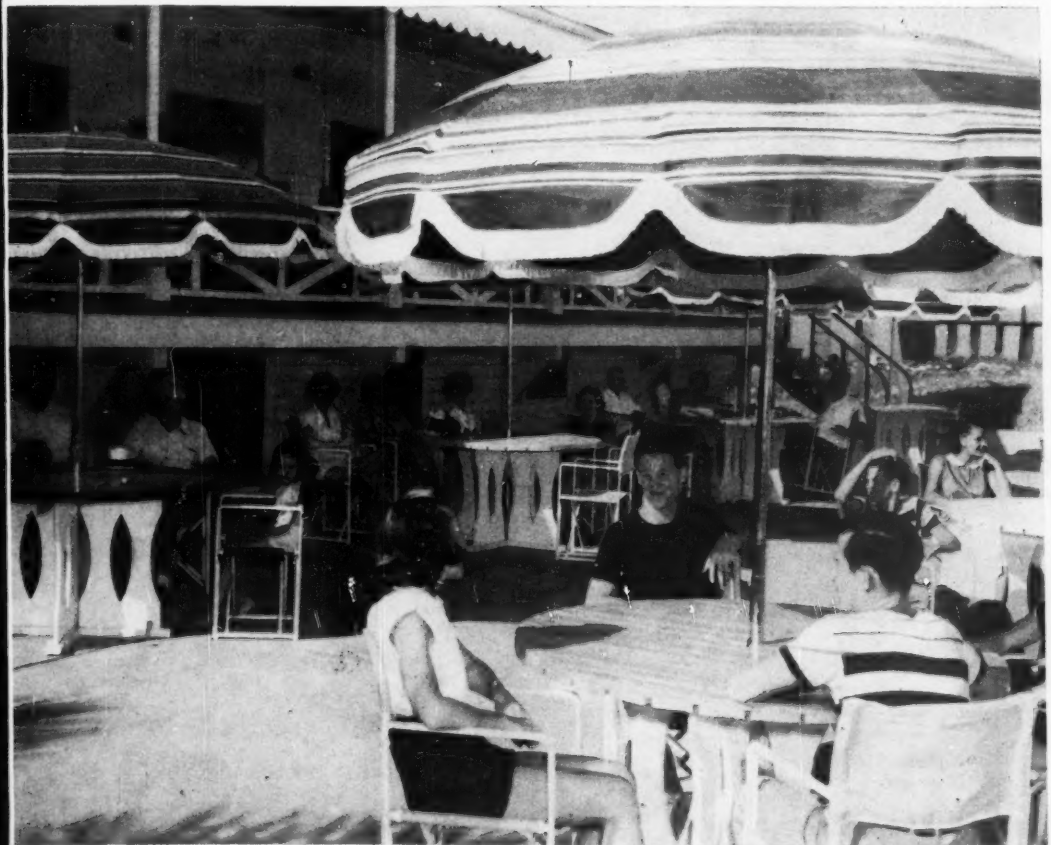
LARGE PORCHES offer handy facilities for family luncheons

POOL is one of the popular sports in basement game room

TINY TOTS are welcome and contribute to homelike atmosphere

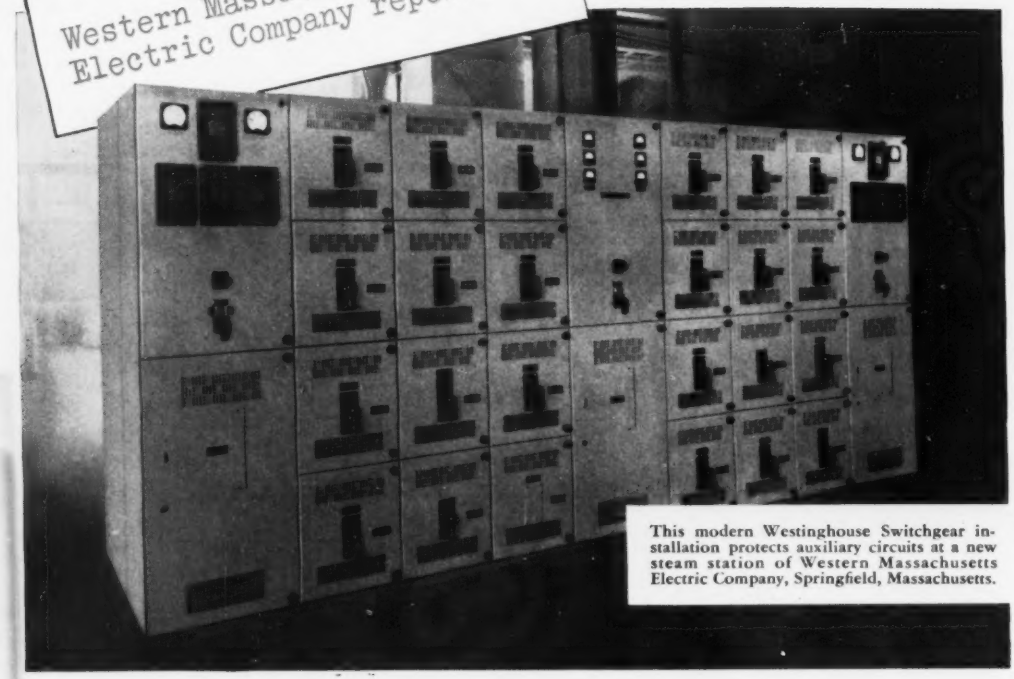
are the thing to drink

BALLROOM, 40 by 80 ft, is just the place for dances. Opposite ends have fireplace and stage



SUN DECK gives guests an opportunity to enjoy South Carolina weather and relax in attractive surroundings

Western Massachusetts Electric Company reports...



This modern Westinghouse Switchgear installation protects auxiliary circuits at a new steam station of Western Massachusetts Electric Company, Springfield, Massachusetts.

"COSTS LESS to apply... to install"

The experience of Western Massachusetts Electric Company demonstrates how Westinghouse Low-Voltage Switchgear helps to reduce power control costs. Specifically, they report:

Use of factory-assembled, low-voltage switchgear in connection with the supply to station auxiliaries on our West Springfield plant resulted in appreciable savings in two ways:

1. *Use of standard factory-assembled switchgear simplified installation and effected savings in installation costs.*
2. *Where switchgear is located adjacent to equipment being supplied, it was possible to use feeder breakers to control some of the large motors; thus, eliminating special motor control equipment.*

For central station services, industrial plants or large commercial buildings, Westinghouse Low-Voltage Switchgear offers you this same safe, low-cost means of protecting vital electrical services.

For complete information send for Booklet B-2296-D. Address: Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

J-60754

YOU CAN BE SURE.. IF IT'S Westinghouse

LOW-VOLTAGE SWITCHGEAR

Passes Million-Kw Peak

Union Electric Co of Missouri on Aug. 7 reached a new peak load of 1,001,000 kw, making it the 11th company in the nation to exceed a 1 million-kw peak.

•

Broadcast Shifted

Columbia Broadcasting System has changed the time for the farm electrification broadcast, "The Mohawk Valley-50 Years Ago" (EW, Aug. 6, p 13) to August 25, 2:30 to 3:00 P.M.

MEETINGS

American Institute of Electrical Engineers
Pacific General Meeting, Multnomah Hotel, Portland, Ore., August 20-23; Fall General Meeting, Hotel Cleveland, Cleveland, Ohio, October 22-26.

Pacific Electronic Exhibit
Civic Auditorium, San Francisco, August 22-24.

Illuminating Engineering Society
National Technical Conference, Hotel Shoreham, Washington, D. C., August 27-30.

Northern California Electrical Bureau
Annual Exposition, Civic Auditorium, San Francisco, September 7-14.

Rocky Mountain Electrical League
Fall Convention, La Fonda Hotel, Santa Fe, N. M., September 9-12.

Edison Electric Institute
Commercial Cooking Committee, EEI Headquarters, 420 Lexington Ave., New York, September 10-11; Prime Movers Committee, Statler Hotel, Buffalo, N. Y., October 1-2; Meter-Service Committee, Purdue University, Lafayette, Ind., October 1-3; Electrical Equipment Committee, New Ocean House, Swampscott, Mass., October 8-9; Transmission-Distribution Committee, Sheraton Hotel, Rochester, N. Y., October 10-11.

Instrument Society of America
National Instrument Conference-Exhibit, Sam Houston Coliseum, Houston, Tex., September 10-14.

Northwest Public Power Association
Joint Meeting with Montana REA Association, Hotel Florence, Missoula, Mont., September 12-14.

★Michigan Municipal Utilities Association
Annual Meeting, Plankinton House, Milwaukee, Wis., September 13-14.

International Association of Electrical Inspectors
Southwestern Section, Hotel Lafayette, Long Beach, Calif., September 13-15; Northwestern Section, Hotel Davenport, Spokane, Wash., September 19-21; Western Section, Hotel Fontenelle, Omaha, Neb., September 25-27; Eastern Section, Hotel Claridge, Atlantic City, N. J., October 1-3; Southern Section, Hotel John Marshall, Richmond, Va., October 15-17.

Pennsylvania Electric Association
Annual Meeting, Benjamin Franklin Hotel, Philadelphia, September 18-19; Transmission-Distribution Committee, Hotel Concord, Northeast, Pa., October 11-12; Hydraulic Power Committee, Iron Temple Club, Dallas, Pa., October 11-12; Joint Relay-Communications Committee, Emerson Hotel, Baltimore, Md., October 18-19; Electrical Equipment Committee, Penn Alto Hotel, Altoona, Pa., October 22-23; Meter Committee, Arlington Hotel, Oil City, Pa., October 25-26.

Public Information Program
Annual Workshop Conference, Edgewater Beach Hotel, Chicago, September 20-21.

Wisconsin Utilities Association
Accounting Section, Plankinton Hotel, Milwaukee, Wis., September 20-21

Public Utilities Association of the Virginias
Annual Meeting, Greenbrier Hotel, White Sulphur Springs, W. Va., September 21-22.

American Society of Mechanical Engineers
Fall Meeting, Hotel Radisson, Minneapolis, Minn., September 25-28.

Iowa Utilities Association
Management Conference, Fort Des Moines Hotel, Des Moines, Iowa, October 1-2.

Southeastern Electric Exchange
Engineering-Operation Section Conference, John Marshall Hotel, Richmond, Va., October 4-5; Sales Conference, Roosevelt Hotel, New Orleans, La., October 31, November 1-2.

National Farm Electrification Conference
Annual Meeting, Hotel Gibson, Cincinnati, October 9-10.

National Electrical Contractors Association
Annual Convention, Shoreham Hotel, Washington, D. C., October 9-12.

Indiana Electric Association
Annual Convention, French Lick Springs Hotel, French Lick, Ind., October 10-12.

International Association of Electrical Leagues
Annual Conference, Roosevelt Hotel, New Orleans, October 10-13.

Association of Edison Illuminating Companies
Annual Meeting, The Greenbrier, White Sulphur Springs, W. Va., October 11-13.

National Association of Railroad and Utilities Commissioners
Francis Marion Hotel, Charleston, S. C., October 16-19.

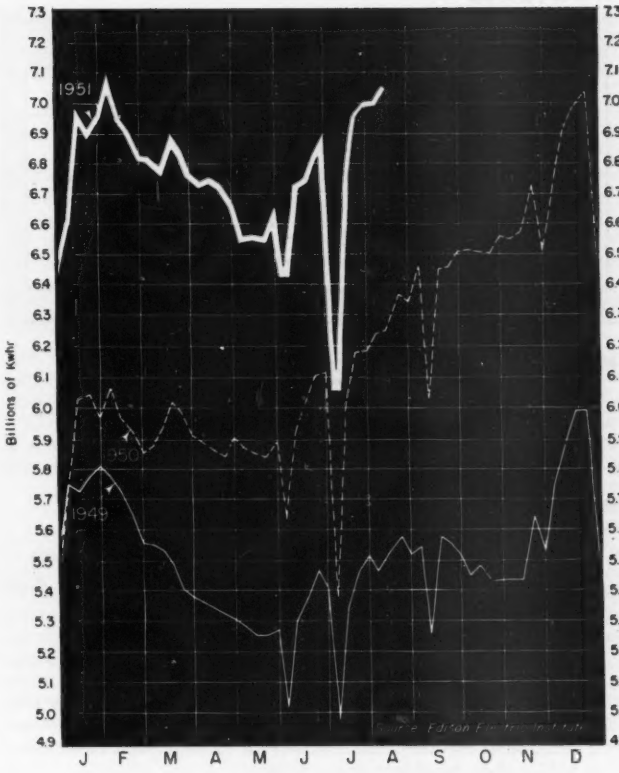
★Public Utilities Advertising Association
Hotel Cleveland, Cleveland, Ohio, October 18-19.

National Association of Corrosion Engineers
South Central Region Meeting, Robert Driscoll Hotel, Corpus Christi, Tex., October 18-20.

National Electronics Conference
Annual Conference, Edgewater Beach Hotel, Chicago, October 22-24.

American Standards Association
Annual Meeting, Waldorf-Astoria, New York, October 22-24.

★Addition this week.



Output Week Ended Aug. 11—7,069,890,000 Kwhr

Weekly Output, Millions Kwhr

1951	1950	1949
Aug. 11 7,070	Aug. 12 6,253	Aug. 13 5,530
Aug. 4 7,003	Aug. 5 6,247	Aug. 6 5,466
July 28 7,005	July 29 6,190	July 30 5,518
July 21 6,975	July 22 6,186	July 23 5,462
July 14 6,739	July 15 6,006	July 16 5,342
July 7 6,077	July 8 5,380	July 9 4,982
June 30 6,898	July 1 6,115	July 2 5,410
June 23 6,835	June 24 6,102	June 25 5,466
June 16 6,747	June 17 6,012	June 18 5,373
June 9 6,734	June 10 5,921	June 11 5,300

Percent Change from Previous Year

	Aug. 11	Aug. 4	July 28
New England	+ 4.5	+ 4.3	+ 6.8
Mid-Atlantic	+12.5	+ 9.3	+11.9
Central Industrial	+ 9.2	+ 8.5	+10.8
West Central	+13.3	+15.0	+14.5
Southeast	+12.7	+12.0	+12.4
South Central	+33.4	+26.9	+29.0
Rocky Mountain	+ 8.1	+11.5	+11.9
Pacific Coast	+14.2	+15.6	+13.6
Total United States	+13.1	+12.1	+13.2

YIELDS (%) — Operating Electric Utility Securities

Quality	Bonds			Preferred Stocks			Common Stocks		
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
DATE 1951									
Aug. 9	**2.89**	**2.93**	**3.11**	**4.07**	**4.27**	**4.64**	**5.52**	**6.18**	**6.99**
Aug. 2	2.90	2.96	3.12	4.08	4.27	4.66	5.52	6.18	7.09
END OF QTR.									
2nd 1951	3.02	3.11	3.23	4.11	4.37	4.68	5.73	6.38	7.37
1st 1951	2.87	2.93	3.00	3.96	4.19	4.52	5.47	6.20	7.13
4th 1950	2.65	2.67	2.78	3.86	4.14	4.51	5.80	6.54	7.44
3rd 1950	2.66	2.67	2.76	3.81	4.08	4.46	5.70	6.54	7.25

Data: Reis & Chandler, Inc.

American P&L Hearing Set for Aug. 24 by SEC

The Securities and Exchange Commission will hold a hearing Aug. 24 on the problems involved in the immediate dissolution of American Power & Light Co, utility holding company.

American P&L was first ordered by the commission to liquidate in 1942 and has disposed of some of its holdings in operating companies.

The hearing is designed to determine what American P&L will do with its remaining holdings and whether the 1942 order should be enforced by court action.

The SEC will take under consideration a proposal by American to distribute a $2 a share liquidating dividend, totaling $4,684,822, to its stockholders and a request by the Washington Public Service Commission that the stock of Washington Water Power Co, main subsidiary of American, be distributed to stockholders of the parent company. The commission has agreed that American's president, Howard L. Aller, could continue as officer and director for another year.

Idaho's Gov Len Jordan earlier had asked the SEC to compel American P&L to dissolve and distribute WWP stock to its stockholders. He said American's plan to distribute the $2 liquidating dividend "clearly indicates American has no present intention to distribute stock of Washington Water Power Co." Idaho passed a law forbidding sale of any electrical distribution system in Idaho to a group outside the state shortly after American proposed to sell its common stock in WWP to a group of public utility districts in eastern Washington. A Washington state court ruling also forbade the sale to the PUD's.

In addition to holding all the common stock of WWP, American P&L still holds all the securities of Washington Irrigating & Development Co, and has holdings in Portland Gas & Coke Co, and some $8 million in cash or negotiable paper.

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June Operating Revenues Rise 9.6% Over Year Ago

Electric operating revenues of the larger privately owned utilities in the United States in June totaled $421,769,000, an increase of 9.6% above June, 1950, revenues of $384,989,000, according to preliminary figures announced by the Federal Power Commission.

Gross income in June, including other utility operating income, amounted to $88,206,000, a decrease of 2.5% for the month. Net income was down 6.1% to $63,124,000 from the $67,299,000 for June, 1950.

Revenue deductions (including operating expenses, depreciation, and taxes) were $344,285,000, 11.2% over those of June last year.

FINANCIAL BRIEFS

Indiana & Michigan Electric Co has changed its fuel clause. The clause is now expressed in terms of cost per million Btu and the price is based on the average cost at the Twin Branch Plant and the Tanners Creek Plant. The price formerly was based only on the cost at Twin Branch. The change is expected to save the company's large light and power customers $400,000 a year. . . .**Detroit Edison Co** has revised its fuel clause so it will be based on the cost of Btu of fuel regardless of whether the fuel is coal, oil, or gas. Previously the company's fuel clause was based on the price of a given weight of coal. . . . **Consumers Power Co** has established a controlled commercial electric water heating rate in the area formerly served by Michigan Public Service Co of 1.5¢ per kwhr for the first 100 kwhr and 1.4 per kwhr for more than 100 kwhr. There is no fuel clause in this rate.

Utah Power & Light Co plans to offer competitively $9 million in first mortgage bonds and 175,000 common shares . . . **Southern Colorado Power Co** intends to offer its stockholders 30,970 common shares at $9 a share on a 1-for-22 basis. . . . **Imperial Irrigation District,** California, will offer $6.5 million electric revenue bonds, 1955-81, Sept. 11. . . . **Alabama Power Co** of Birmingham will sell competitively $15 million first mortgage bonds, 1981, on Sept. 11.

Mexico's federal electricity commission has purchased electric power plants in six Sonora towns from Public Service Enterprises, Inc. The commission will supply power to Hermosillo, Guaymas, Ciudad Obregon, Navojoa, Huatabampo, and Magdalena. The commission said it bought the plants because the private owners lacked credit to expand its facilities.

Jacksonville's utilities commissioner, J. Dillon Kennedy, has denied the city's financial crisis is due to the reduction in electric utility rates. The municipal system's rates were cut last March 1. Kennedy declared "I contend that utilities will earn more money by selling electric power at reasonable rates than at unduly high rates."

Myrtle Beach, S. C., is taking advantage of a purchase option to acquire the electrical distribution system serving the town from the South Carolina Public Service Authority. The authority bought the system from South Carolina Utilities Co in 1941.

Summit (N. J.) City Council has submitted a recommendation for a referendum in November to determine how to finance a proposed plan for underground city power lines to its public utilities committee. The plan, costing $7 million, was drafted by a citizens committee formed after the severe storm last November.

IN THE INDUSTRY

FISCHER BLACK

The often predicted crisis in the electrical industry's expansion program has now become a reality. Boiler tube shortages, transmission pole line hardware, and deficiencies in quarterly allotment of overhead wire are merely small examples of the big shortages just ahead.

The Edison Electric Institute interim report on the current situation (p 5) states there is "a sharp turn for the worse in delivery dates for electric equipment by reason of the fact that steel mills are not accepting orders up to the amounts provided for in the CMP allotments." The report states further that "lack of structural steel during the fourth quarter of 1951 will necessitate suspending construction work on more than 30 projects." In total, the survey committee forecasts a loss from 2 million to 4 million kw by the end of 1952.

Metal Supply Decreases

When one studies recent reports from Washington, it becomes apparent that these estimates may be understatements of the situation which may develop. For the fourth quarter, structural steel allotments are little more than 50% of requirements. Among other things, numerous transmission lines to important defense and defense-supporting industries are being held up. Two cases in point exist in central New York State and near Houston, Texas. Aluminum conductor requirements are twice 1950 levels whereas little progress has been made in increased aluminum capacity. The expansion program to about 1 million tons of aluminum per year was planned primarily to fill the needs of the military airplane program which called for 95 wings. If, as it now appears, the program is increased to somewhere in the neighborhood of 130 wings, the aluminum program will come nowhere near equaling demands. It will be the middle of 1952 before the airplane demands will begin to reach heavy proportions. Of course, the copper situation, which is expected to become most critical by the middle of 1952, is without immediate solution. New capacity can barely keep pace with worked-out mines.

Give Depa a Hand

From now on out, Depa will take the brunt of the industry's worries. Here the primary responsibility will lie for assuring power supply to the defense and defense-supporting plants. They will have the impossible task of setting up some kind of schedule for distributing a heavily curtailed supply of electrical equipment. Members of the industry should keep in mind the fact that cutbacks of materials for the electrical equipment program have been extremely drastic; so they must, therefore, remain completely sympathetic with Depa's problems.

It must also be remembered that industrial and commercial loads will be far behind schedule in view of the cuts in material for these fields of activity. So it can be assumed that in the long run peak loads will not develop as fast as now predicted. This should provide a reasonable cushion for the loss in generating capacity and lines which is ahead.

But this does not mean that industry spokesmen can risk continuing the "no power shortage" theme. Some of the cuts that have been made can be attributed to claims of industry preparedness. It would be risking further reduction in the program if the dangers in the current situation are not forcefully presented to the mobilization authorities.

TECHNICAL NOTES

ARCHER E. KNOWLTON

Zinc has begun to lose its protective value when a reddish-brown stain on galvanizing reveals incipient corrosion of the iron.

Ten turbine-generators can be operated in over a thousand combinations, fifteen in over 32,000, and twenty in more than a million. Tough on the system operator.

Graduate engineers will be 40,000 short of national needs by 1954 unless enrollment is stepped up immediately.

Neoprene jackets and oil-base compound insulation have been credited with sharp reduction in troubles with control cables.

Intercept valves may not be strictly necessary but they present a very handy means of blowing out of the turbine steam line the trash that might otherwise collect on the blading.

Centralized control in 20 years has increased the megawatts per operator and attendant from 4 to 6-fold.

Maintenance runs higher per kw with centralized control but is insignificant in comparison with operating costs without the control centralized.

Meters of far less uncertainty are needed for determining amounts of interference with radio and television reception in power transmission areas.

Base loading without regulation is not always the most advantageous way of utilizing new high-efficiency generation.

Generator voltage levels may not be optimum economically when due consideration is given to the associated equipment.

Generation is being added so rapidly that new units are constituting an increasing fraction; not all can be operated around the clock, some must be started and stopped.

Original coils are still in service in all the generators built for 22-kv operation since 1913.

Induced draft fans will be less prevalent, even as emergency provision, when pressurized combustion is perfected.

NEWS ABOUT PEOPLE

Evers Is Executive VP of Commonwealth Edison

John W. Evers, Jr, vice president, has been made executive vice president of Commonwealth Edison Co.

J. W. EVERS, JR

H. P. SEDWICK

H. P. Sedwick has been named to a similar position with Public Service Co of Northern Illinois, subsidiary of Commonwealth Edison.

Evers has spent his entire business career with Commonwealth Edison. He became secretary of the utility in 1924 and vice president in charge of purchasing in 1943.

Sedwick joined Public Service in 1913 as an engineer. He served in various capacities including general manager before becoming vice president in 1941. He is a past president of the Western Society of Engineers.

William A. Sredenschek has been appointed manager of materials and purchasing for General Electric Co. He formerly was assistant to the vice president in charge of purchasing and traffic, Harry L. Erlicher, retired (EW, July 9, p 22), whose duties he will assume. Sredenschek joined GE in 1921 as a student engineer. He served in the testing department and then entered sales training becoming assistant supervisor and then supervisor of the department. In 1936 he became assistant to the vice president in charge of Apparatus Department sales and in 1940 assistant manager and then manager of trade relations and special contracts for the department.

L. J. Bourke has been made assistant to the executive vice president of Puget Sound Power & Light Co at Seattle, Wash., and **Edward H. Heister** has been named local manager of the utility's Port Orchard, Wash., office. Bourke has been serving as supervisor in the general commercial department. He started with the company as a student engineer in 1923. Heister, who joined the company 16 years ago as a meter reader, also has been a supervisor in the general commercial department.

Clarence E. Archer, supervising engineer at Appalachian Electric Power Co's Glen Lyn plant, has been promoted to assistant plant manager. He has been with the company since 1937 coming to Glen Lyn in 1945 after serving as assistant substation superintendent at Switchback.

C. Richards McDonald, purchasing agent for Tide Water Power Co, Wilmington, N. C., has joined the Washington staff of Ebasco Services, Inc., as assistant to the director of the Washington office.

Dr C. J. Breitwieser has joined P. R. Mallory & Co, Inc, as executive assistant to the vice president in charge of engineering. He formerly was chief of electronics and head of the engineering laboratories for Consolidated Vultee Aircraft Corp.

Pourtless Elected VP by Florida Power Corp

Florida Power Corporation has elected Robert C. Pourtless a vice president. The company also named Hugh K. McKean general superintendent.

Pourtless, with Florida Power for

R. C. POURTLESS

27 years, will continue to head the real estate, tax, and rate department. He joined the utility in 1924 as superintendent of transmission and distribution and later became supervisor of construction and new property acquisition. He has handled real estate, tax, and rate matters for the utility since 1927.

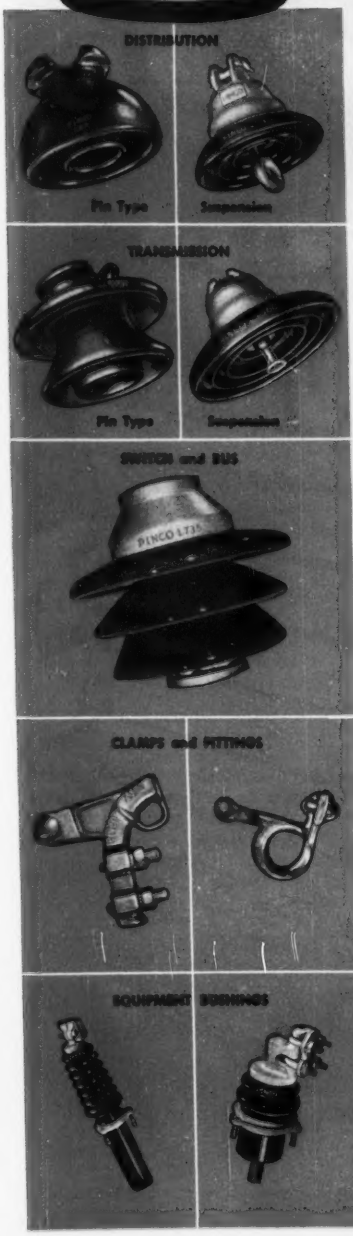
McKean formerly was superintendent of operating construction and maintenance. He will have charge of general operations, construction, maintenance, production, transportation, and mechanical engineering. He came to Florida Power in 1946 after 18 years' experience in the utility field in Indiana.

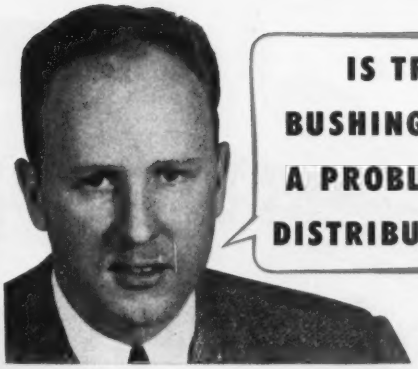
•

R. B. Denhardt has been appointed manager of new business development. by Central Hudson Gas & Electric Corp, Poughkeepsie, N. Y. In other appointments **V. E. Shepherd** was named manager of advertising and information; **R. A. Dickson,** coordinator of methods and practices; and **Charles Chlanda, Jr,** residential and commer-

(*Continued on page* 27)

PINCO INSULATORS



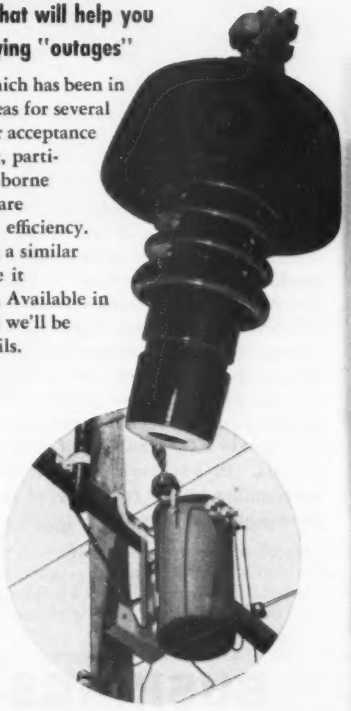


IS TRANSFORMER BUSHING FLASHOVER A PROBLEM ON YOUR DISTRIBUTION LINES?

If it is, then here is an idea that will help you to eliminate costly and annoying "outages"

It's the Pinco L 5206 Fog Cap which has been in use on installations in coastal areas for several years and is now finding popular acceptance wherever "fog" conditions exist, particularly in those areas where air-borne industrial and chemical wastes are a constant menace to insulator efficiency.

So if you are confronted with a similar problem, we can help you solve it with the Pinco L 5206 Fog Cap. Available in various sizes. Drop us a line and we'll be glad to give you complete details.



FEATURES OF THE PINCO L 5206 FOG CAP

1. **PROTECTS** upper part of bushing from contamination; also keeps it dry, thereby maintaining an effective leakage path.
2. **ELIMINATES** annoying service interruptions caused by bushing "flashover."
3. **EASY TO INSTALL** on present equipment. Just remove bushing terminal and place PINCO L 5206 Fog Cap in position and replace terminal. Cap is equipped with coroprene gasket.

The Porcelain Insulator Corporation
766 Main St., Lima, N. Y.
Sales Agents: JOSLYN MFG. & SUPPLY CO.
Offices in Principal Cities

PINCO INSULATORS

Suspension Insulators . . . Switch and Bus Insulators . . . Distribution Clamps . . . Distribution Pin Types and Guy Strains . . . Transmission Line Fittings . . . Tree Insulators . . . Transformer and Circuit Breaker Bushings . . . One Piece and Multi-part High Voltage Pin Types . . . Suspension and Strain Clamps . . . Indoor Bus Support Porcelain . . . Lightning Arrester Porcelain.

Rated at 220 kv, 50,000 kva, this huge single-phase unit is one of the largest transformers built by Allis-Chalmers. According to its manufacturer . . . "All modern A-C features are incorporated in this equipment, including rigidly braced, vacuum dried and treated coils - controlled gasket compression - fin type radiators - oil sealed inert gas oil preservation, pioneered by Allis-Chalmers and now standard on over 5,000,000 kva of power transformers. In addition to other factors contributing to the reliability of this apparatus are . . ."

BUSHINGS

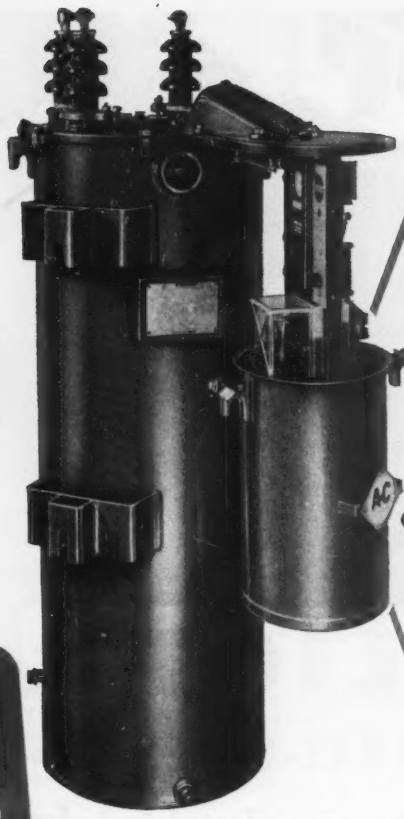
ONE OF THE FINEST COMPONENTS
OF ANY TRANSFORMER

Ohio Brass

MANSFIELD · OHIO

6136-H

NEW 50 Amp Rating



20% Range of Regulation

±1 Volt Band

Raises KWH Consumption

Increases Customer Goodwill

ALLIS-CHALMERS 5/8% STEP VOLTAGE REGULATOR

YOU CAN PROFIT from Allis-Chalmers 5/8% step regulation in the new larger rating of the 50 ampere JFR regulator. Its low price tag holds original equipment cost down . . . makes regulation even less expensive than before . . . and gives you all the advantages of the Allis-Chalmers 5/8% step regulator line.

This means you can increase KWH consumption — and revenue, cut complaints, and increase customer goodwill. That's because Allis-Chalmers 5/8% Step Regulators hold a ± 1 volt band — give you close, accurate regulation over a 20% range.

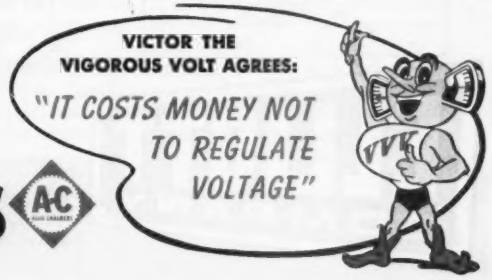
Simple Adjustment

The new 50 amp JFR regulator is fully automatic in a rating of 38.1 kva, 7620 volts, 50 amp for operation at 7960, 7200, 6900, 5000, 4330, and 2500 volts. It has a unit type control grouped on a single panel to make maintenance and adjustment easy. Only two knob settings are needed. Voltage level and voltage band can be set in less than 60 seconds.

Jump-Proof Mounting Brackets

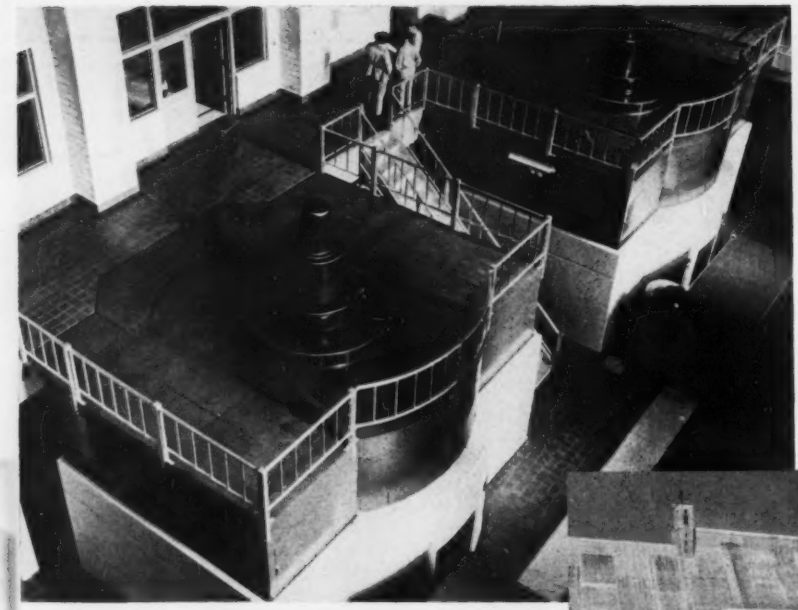
The jump-proof mounting brackets on the new 50 amp JFR Regulator are the same as used on distribution transformers. A heavy driving motor operates under oil for tap changing. There are no commutators, slip rings, brushes, no centrifugal switch.

You are losing revenue every day you wait to correct low voltage. Call your nearest Allis-Chalmers district office today for information on how the 50 amp JFR regulator can cut your regulation costs and improve service. Or write: Allis-Chalmers, Milwaukee 1, Wisconsin. A-3293



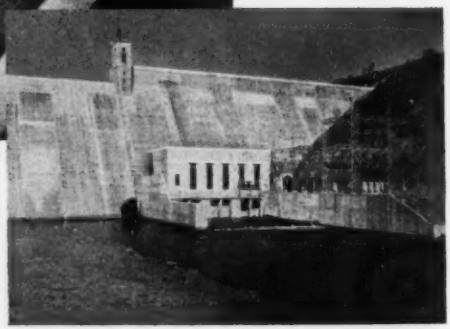
ALLIS-CHALMERS

Originators of 5/8% Step Regulation



Elliott FABRI-STEEL MOTORS AND GENERATORS

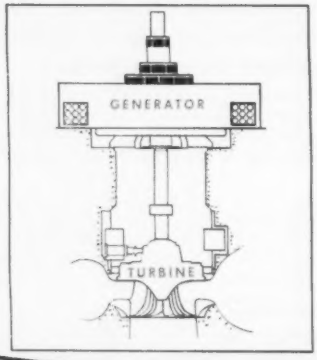
Two Elliott umbrella-type generators in the Narrows Dam, Arkansas, power plant, located on the Little Missouri river.



ELLIOTT

"FABRI-STEEL"

Construction now adapted to hydraulic-turbine-driven generators



The mechanical problems inherent in the design of vertical generators, are readily met by the broad range flexibility of Elliott fabricated steel technique and construction, coupled with electrical design "know-how". The installation shown above is a case in point—two Elliott umbrella-type generators driven by Baldwin Francis type water turbines. The generators are rated 9,444 kva, 0.9 pf, 225 rpm, 3 phase, 60 cycle, 13,800 volts.

The above installation is typical of usual Elliott cooperation with allied manufacturers and the user to produce a well-engineered, attractive-appearing installation.

ELLIOTT COMPANY

L-818

Ridgway Division • Ridgway, Pa.

Plants at: JEANNETTE, PA. • RIDGWAY, PA.
AMPERE, N. J. • SPRINGFIELD, O. • NEWARK, N. J.

1901 1951

News About People

(*Continued from page* 22)

cial sales director. **E. E. Althouse,** electric distribution manager, was promoted to the position of administrative assistant to the vice president in charge of operations. The utility also appointed **H. D. Ronk** acting electric distribution manager and **T. F. X. Vail** acting electric distribution superintendent of the Mid-Hudson district.

L. M. Grawemeyer has been appointed sales manager of the Illuminating Division of the Miller Co, Meriden, Conn. A member of the Miller sales organization since 1927, Grawenmeyer has represented the company in the Philadelphia area for the past 15 years.

Gustaf Ostlind, formerly an electrical engineer with the Royal Board of Waterfal, Sweden, has joined the engineering staff of Pacific Power & Light Co. The company also has promoted **Roy Vernstrom** from advertising manager to executive assistant to the president and vice president. **R. K. Foley** succeeds Vernstrom as advertising manager.

H. D. Cutworth, engineer, in charge of electrical production and transmission, has been named superintendent of the electric department of the Springfield, Ill., Water, Light & Power Department.

James C. Barney has been appointed assistant manager of sales for the wire rope division of John A. Roebling's Sons Co. The former assistant manager of the Los Angeles district office joined the company in 1925.

Claire Titus has been appointed manager of Central Arizona Light & Power Co's commercial and industrial sales section. He succeeds **C. T. Yates** who has resigned to become engineer for the Arizona Electric Coordinating Committee. Titus has been with Calapco since January.

Harrison B. Hoefer has retired as chief engineer of power plants for the Milwaukee, Wis., water department. With the department for 41 years, he had been chief engineer for the last ten years.

Northwest Association Elects Cummins Its Head

A. S. Cummins, president of California Oregon Power Co, has been elected president of Northwest Electric Light and Power Association (EW, Aug. 13, p 103).

Cummins succeeds Thomas W. Del-

A. S. CUMMINS

zell, chairman of the board of Portland General Electric Co. Other officers elected were R. E. Gale, assistant to the president of Idaho Power Co, first vice president; and John Dierdorff, vice president of Pacific Power & Light Co, second vice president.

Cummins has been president of Copco since 1941. Previously he served as vice president and secretary of Standard Gas & Electric Co, Chicago.

Starting his career in the electrical field in 1914 with Northern States Power Co, Minneapolis, Cummins went to H. M. Byllesby & Co after service in World War I. He later became vice president of the Byllesby company.

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T. C. Finnell has been appointed assistant manager of the application engineering department for Westinghouse Electric Corp's Motor and Control Division, Buffalo, N. Y. Formerly manager of the metallic rectifier section, he succeeds **T. R. Lawson** who has been named assistant sales manager of industrial products for the company.

Hardage L. Andrews, executive vice president of General Electric Co, has retired after 41 years' service. He started with GE in 1910 as a student engineer and progressed through various railway motor and railway engineering assignments becoming engineer in charge of the Transportation Engineering Department in 1929. In 1934 he was made vice president in charge of steam railroad electrification. The following year he became responsible for all transportation activities. In 1939 Andrews was placed in charge of the Appliance and Merchandise Department. He was elected executive vice president early this year.

R. W. Staal, advertising supervisor of Consumers Public Power District, Columbus, Neb., has been appointed new-business supervisor. In his new position he will have charge of all commercial and new business of the company's statewide system.

OBITUARY

J. L. R. Hayden, 70, retired General Electric Co engineer and foster son of the late Dr Charles P. Steinmetz, died Aug. 12 at Schenectady. Hayden joined GE in Boston in 1897 and was transferred to Schenectady in 1900 where he became associated with Steinmetz. He worked in the company's general engineering laboratory at Schenectady during most of his 46 years with GE, retiring in 1947.

Philip N. Fleck, 46, residence sales supervisor for the Western Division of Niagara Mohawk Power Corp, died July 31 while vacationing in Canada. He had been with Niagara Mohawk since 1926. Fleck became assistant to the manager of the Lighting Service Bureau in 1933 and from 1934 until 1939 managed the Five Star Home Bureau. He was made residence sales supervisor in 1939.

Mayland H. Morse, 54, former chairman of the Public Service Commission of New Hampshire, died at Concord, N. H., recently. He was associated with Stone & Webster Corp, Boston, in his earlier career. He headed the New Hampshire regulatory board for six years.

Fred E. Hale, 65, engineer in charge of structural design for Southern Services, Inc, died Aug. 5 at Birmingham, Ala.

MANUFACTURERS and MARKETS

BullDog Reduces Its Line to 38 Master Switches

BullDog Electric Products Co., Detroit, has initiated a new marketing program under which 38 Vacu-Break master switches will replace the hundreds formerly manufactured but at the same time will cover the same field of application.

Each switch for any system was generally available in three classifications—A, C, and D. The spread of ratings for each switch type (30 to 1,200 amps and 250 to 575 volts) has resulted in hundreds of switches produced by each manufacturer.

After careful research, BullDog found that each master safety switch could cover several applications. Type C and D switches were eliminated since an A switch more than answered the requirements of all three. Bulldog has reduced its line approximately two-thirds by making A switches only. The new switch is equipped with a voidable interlock that converts it into a Type C switch for customers who want Type C switches only.

BullDog also has eliminated many slow-moving switches. It was discovered that many applications could be answered through the use of a switch selected from a fast-moving type. A 30-amp, 3-pole, solid neutral Type A switch, for example, can be used for straight 2-pole applications by ignoring the neutral when making wiring connections. It also can be used for Type C and D applications.

As a result of the reduction in the number of switches, contractors will be able to carry a more complete stock with less investment and can end the confusion which has slowed delivery and installation.

•

Milwaukee Firm Moves

Northern Light Co, Milwaukee manufacturer of commercial and industrial lighting equipment, has bought a factory building at 1657 North Water St and is now operating from the new location. The building has 48,000 sq ft of floor space.

GIANT BUSHING shown above is one of 39 built by Locke Department of General Electric Co for TVA steam plants at New Johnsonville and Widows Creek. It has a 7,000-amp capacity, with a 9-in. square hollow copper conductor. The bushing stands 60 in. high, weighs 500 lb has a 14-in. diameter hole, and a 20.5-in. diameter over the petticoat

Merchandising Program Developed by Hotpoint

A five-point merchandising program for commercial electric cooking equipment, designed to help dealers and public utilities develop the rapidly expanding industrial in-plant feeding equipment market, has been announced by the commercial division of Hotpoint, Inc.

The new plan offers dealers four-color display stands, three-color self-mailers, utility envelope stuffers, use-value booklets for commercial cooking appliances, and three-color selfmailers for counterline equipment.

•

Signs Contract for Power

Worthington Pump & Machinery Corp, Harrison, N. J., plans a $500,000 modernization program at its Oil City, Pa., plant. The present foundry will be reequipped. To supply the increased power for the modernized plant and to guarantee uninterrupted power service, the company has signed a contract with Pennsylvania Electric Co for the purchase of all power requirements.

Allis-Chalmers Billings Up 29% for 1st Half

Allis-Chalmers Manufacturing Co. has reported that billings during the first six months of 1951 increased 29% compared with those for the corresponding period a year ago. For the first half this year they were $208,199,919 and for last year $161,682,673.

The record sales volume during the first half resulted in a 49% increase in earnings before taxes over the first six months of 1950. The figures are $27,492,694 for 1951 and $18,391,475 for 1950. Net income for the first half of 1951 totaled $10,672,694 after deducting $16,820,000 for federal income and excess profits taxes. Net income for the same period last year was $10,291,475 and federal taxes $8.1 million. Net earnings were equivalent to $4 per common share compared with $3.86 a year ago.

Billings in the second quarter of 1951 totaled $120,894,048. Net earnings for the second quarter were $6,092,939.

Unfilled orders as of June 30, 1951, for the general machinery division amounted to $206,500,566. A year earlier the figure was $94,301,700.

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NAED Moves to New Office

The National Association of Electrical Distributors has moved its headquarters offices in New York City from 500 Fifth Ave to Norway House, 290 Madison Ave, between 40th and 41st Streets. The move to larger offices was necessitated by an increase in the association's staff.

MANUFACTURING BRIEFS

The emergency repair depot set up by Westinghouse Electric Corp at its jet engine plant in Kansas City has overhauled and returned to service more than 750 electric motors, three dozen power transformers with a total capacity of 18,000 kva, and more than

100 major pieces of electrical switchgear since the flood waters of the Missouri and Kaw Rivers have receded.

General Electric Co has prepared a series of suggestion booklets for utilities, department and furniture stores, electrical wholesalers, dealers, and lamp manufacturers to help them participate in the company's "Back to School" lighting promotion program. The booklets are available through the General Electric Inquiry Bureau, Nela Park, Cleveland, Ohio. The program is designed to get families to create properly lighted home study centers.

James G. Biddle Co, Philadelphia, announces that the Dr Horn tachometer is once more available in the United States. This instrument is basically the same as was offered previously. It has six ranges covering from 25 to 30,000 rpm in one instrument and is reported to be protected against overspeeding. In addition the company has facilities for servicing the older and latest models of the centrifugal hand tachometer. James G. Biddle Co has been appointed sole distributor.

Sylvania Electric Products, Inc, has organized a subsidiary, Sylvania Electric of Puerto Rico, Inc, to fabricate mica for use in radio tubes. The subsidiary has leased a 10,000-sq-ft plant in Rio Piedras, a suburb of San Juan. Production is expected to start within 60 days.

Electric Storage Battery Co has moved its general offices from its plant at 19th St and Alleghany Ave to 15th and Chestnut Sts in Philadelphia. The new quarters are located on the six upper floors of the Robinson Building.

Babcock & Wilcox Co has selected West Point, Miss., as a site for a $2.5 million plant to manufacture steam boiler parts and power generators. Construction of the plant is expected to begin within four months.

Metal Prices
Aug. 13, 1951

COPPER, Conn., V, lb.	$ .24½
LEAD, N. Y., lb.	.17
ZINC, prime Western, E. St. Louis, lb.	.17½
TIN, Straits, quel. N. Y. lb.	1.03
ALUMINUM, ingot, base price	.19
NICKEL, base price	.59½
STEEL, billets, Pitts., ton	56.00
STEEL, scrap, No. 1 heavy, Pitts., ton	45.00

NEW ELECTRICAL CONSTRUCTION

A weekly selection of U. S. electrical construction projects announced by private and government utility systems involving more than $70,000. Also listed are major industrial and construction jobs where electrical work is indicated or implied

UTILITIES

Proposed Construction

California—Bureau Reclamation, Dpt. Interior, P.O. Box 570, Tracy switchyard addns., at Tracy Switchyard, Spec. DC-3502.

Ill., McCook—Electromotive Div., General Motors Corp., General Motors Bldg., Detroit, Mich., 160,000 sq. ft., manufacturing bldg. addn. $3,000,000. Argonaut Realty Co., General Motors Research Bldg., Detroit, archts.

Ia., Marshalltown—Iowa Power & Light Co., 312 6 St., Des Moines, generating plant, $12,000,000.

Louisiana — Louisiana Rural Electric Corp., Alexandria, 398 mi. rural distr. lines, 19 mi. 34.5 kv transmission line and sys. imprvs., Rapides Parish. $1,242,000.

Md., Baltimore—Consolidated Gas, Electric & Power Co., Lexington Bldg., power station on Patapsco River below Hawkins Point, incl. 125,000 kw steam electric generator turbine unit, $120,000,000.

Md., Bethesda—General Services Admin., Pub. Bldgs. Service, 19 and F Sts., Wash., 25, D. C., furnishing, installing, del. 4,000 KW non-condensing steam turbo electric generator unit at National Institutes of Health, Boiler Plant and Incinerator Bldg. 11. Proj. 18-063.

New Mexico—Jemez Mountains Electric Co-operative, Espanola, 183 mi. rural distr. line and sys. imprvs., Rio Arriba Co., $410,000.

N. C., Tarboro—Carolina Telephone & Telegraph Co., Tarboro, office, $300,000.

Oklahoma and Texas — Southwestern Bell Telephone Co., 405 N. Broadway, Oklahoma City, 2, Okla., coaxial cable from Oklahoma City, Okla., to Amarillo, Tex. replacing overhead lines, $5,000,000. J. B. Kibler, c/o owner, engr.

Okla., Tulsa—Public Service Co., of Oklahoma, 600 S. Main St., 240,000 KW steam power plant, $9,200,000.

Pa., Easington—Westinghouse Electric Co., Lester, 1 story, brick, steel laboratory, $3,500,000. United Engineers & Constructors, Inc., 1401 Arch St., Phila., consult. engr.

South Dakota — Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, Colo., transmission division, 10 potential and 3 current transformers for Huron, Mount Vernon, Watertown and Sioux Falls sub-stations, Missouri River Basin Proj. Spec. DS 3505, L. N. McClellan, c/o owner, eh. engr.

Texas—State Hy. Comn., Austin, completing Baytown subaqueous tunnel, Contr. II, two 226 ft. tunnel sections, incl. ventilating bldg., in open cut, two open approach sections each 551 ft. in length; garage and maintenance bldg.; crash trunk garage; plumbing and drainage; electrical work, incl. tunnel lighting, mechanical work and tunnel ventilation sys.; ceramic tile and architectural terra cotta throughout entire length of tunnel, niche frames and covers, embankment at north and south ends of project, service roads, etc. Parsons, Brinckerof., Hall & Macdonald, 51 Broadway, New York, N. Y., consult. engrs.

Tex., Greenville—City, one 2,000 KVA, 3-phase transformer, 5 outdoor 15,000 volt, 250,000 KVA switchgear units, consist of 3 generator and 2 power panels, all for establishment of 12,470 KV 4-wire bus at municipal power plant, $85,000. Plans deposit $15. Freese & Nichols, 407 Danciger Bldg., Fort Worth, engrs.

Tex., San Antonio—City, Pub. Service Bd., 201 N. St. Marys St., addnl. electric generating unit, capacity 60,000 to 90,000 KW, $6,000,000-$10,000,000.

Washington—Bonneville Power Admin., 827 N.E. Oregon St., Portland, Ore., constr. Highland Sub-station, Benton Co. Plans deposit $25. L. C. Stewart, 827 N.E. Oregon St., Portland, Ore., engr.

Washington—Quinault Light Co., Quinault, 85 mi. line transmission lines, 300-kw diesel generator, Grays Harbor and Jefferson Counties, $638,999.

Washington—Bonneville Power Admin., 827 N. E. Oregon St., Portland, Ore., constr. Augspurger microwave station, Skamania Co. Inv. 5976. Plans deposit $25. L. C. Stewart, engr.

Wash., Richland—Atomic Energy Comn. for operation of Hanford Works, 21,000 sq. ft. radio metallurgy bldg. at Hanford Works, $1,000,000. Plans deposit $50.

Wis., Wauwatosa—Milwaukee County Institution & Depts., Wauwatosa, central heating and power plant. Approx. $4,000,000. Pfeifer & Schultz, 701 Wesley Temple Bldg., Minneapolis, Minn., consult. engrs.

B. C., Trail—Consolidated Mining and Smelting Co. of Canada Ltd., Trail, B. C., development program incl. power plant on Pend Oreille River, 12 mi. south east of here, $30,000,000; transmission line from Kootenay River plants between Nelson and Brilliant, east to Kimberley and Bloudel $2,850,000; smelter revision at Tadanac, $12,000,000; new fertilizer plant at Kimberley, $9,000,000; Zinc plant addn. at Tadanac, $3,200,000; Bluebill mine and mill at Riondel, $3,000,000; H. B. mine and mill at Salmo, $2,750,000. Water system revision at Tadanac, $1,000,000; power revision at Warfield, $300,000.

N. B., Perth—New Brunswick Electric Power Comn., 1 Dock St., St. John, 5 mi. railway track relocation hydro-electric power development on Tobique River near here. Power Corp. of Canada Ltd., 355 St. James St. W., Montreal, Que., and Dr. Thomas Hogg, Pinewood Ave., York Mills, Toronto, Ont., engrs.

Low Bidders & Contracts Awarded

Ind., Mishawauka—John Griffiths & Son Co., 228 N. LaSalle St., Chicago, 1, Ill., CA. $3,500,000, power plant. U. S. Rubber Co., 1230 Avenue of the Americas, New York, N. Y. Buddy Benjamin & Assocs., 2210 Park St., Detroit, Mich., engrs. Awarded July 23.

Kentucky—Ballard County Rural Telephone Co-operative, Paducah, Ky. Owner Builds. $804,000. telephone lines in Ballard and McCracken Counties.

INDUSTRIAL, COMMERCIAL & PUBLIC BUILDINGS

Proposed Construction

Ala., Anniston—U. S. Eng., P. O. Box 1169, Mobile 7, Ala., plans by Van Keuren, Davis & Co., American Life Bldg., Birmingham, dormitories, mess halls at WAC Base at Fort McClellan, $10,000,000.

Ill., Kankakee—Armour & Co., Union Stock Yards, Chicago, Zone 9, pharmaceutical laboratory and plant, $5,000,000, Holabird & Root, & Burgee, 180 N. Wabash St., Chicago, Zone 1, archts.

O., Lockland—The Formica Co., 4620 Spring Grove Ave., Cincinnati, plans by A. M. Kinney, Inc., 2950 Vernon Pl., Cincinnati, factory, warehouse, boiler plant, railroad siding, office, factory, wholesale mfg. laminated plastic products, $7,900,000.

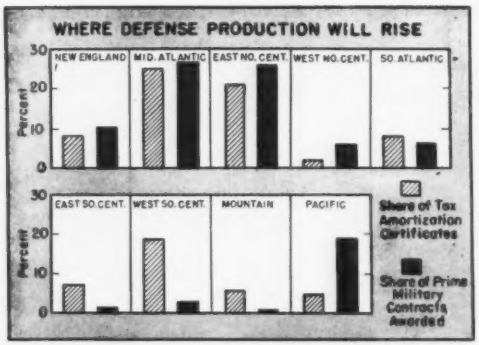
Pa., Pottstown—Firestone Tire & Rubber Co., Pottstown, factory, warehouse and office, $5,500,000. Day & Zimmerman, Inc., 1700 Sansom St., Phila., Pa., consult. engr.

Tex., Grand Prairie—Arlington—Buick-Oldsmobile-Pontiac Div., General Motors Corp., 820 N. Harwood St., Dallas, mfg. or defense assembly plant, on 225 acre site, ½ way between Dallas and Fort Worth, between Grand Prairie City limits and Arlington. $25,000,000.

Low Bidders & Contracts Awarded

Tenn., Elizabethton—Daniel Constr. Co., 429 Main St., Greenville, S. C. CA $7,000,000. mfg. plant for lease to Textron, Inc. City, Elizabethton, Tenn.

Electrical Business Outlook



TWO REGIONS—Middle Atlantic and East North Central—have half of the defense work which has been given out so far

Production Ups and Downs

Industrial production is showing big variations—by region and by industry. It will show more in the coming months.

You can see why by a look at the chart above. Defense business doesn't go the same place as civilian business, at least, not always. So far it's heavily concentrated in the Middle Atlantic and East North Central regions. They're always big producers, but not so dominant as on defense contracts.

Of course, only prime contracts are out now, in many cases. Sub-contracts will spread work over many more areas. And this will mean a pick-up—particularly in metal-working—for factories that are slowed down now by materials shortages.

Military Program Concentrated on a Few Items

But it's a fact that the military program is heavily concentrated on a few items: Trucks, tanks, aircraft, electronics, ammunition. Many of these items are so complex that only relatively few producers can make them, the few firms with previous experience and engineering know-how.

Also, the defense program requires a lot of defense-supporting production of basic materials. But there aren't so many basic producers of steel, aluminum, chemicals, etc., either. Where you really get decentralization is in metal fabricating for simple items and in soft goods.

The defense program doesn't call for much production of this type. New defense plants going up are mostly in basic materials industries or in the aircraft-electronics programs. And they're concentrated in the areas shown above.

Production trends vary by industry too. Total industrial production nose dived in July. The Federal Reserve Board index was off five points. But the big power-consuming industries (chart at right) weren't off as much. "Electrical World's" index slipped less than three points.

Here's what's happening in manufacturing lines. First, the big power consumers:

Steel output is off a little because of the scrap shortage. It's going to take more pig iron to get the steel rate higher. But there will be increases before long.

Non-ferrous metals—refining and fabricating—have just been holding even. Copper shortages are the big trouble. But looking ahead, more aluminum output will push this index higher.

Chemicals, petroleum refining, and coke oven operations have all been rising. That's why the index of five major power-consuming industries has held up better than the Federal Reserve's overall index. And it's a good bet that these groups will continue to raise output.

Paper production has fallen off. Inventories are too high. And business in soft goods lines, which use the most paper in packaging, has been poor lately. It may be several months before paper production shows much of an upswing.

In other lines, the situation is spotty. Take building materials:

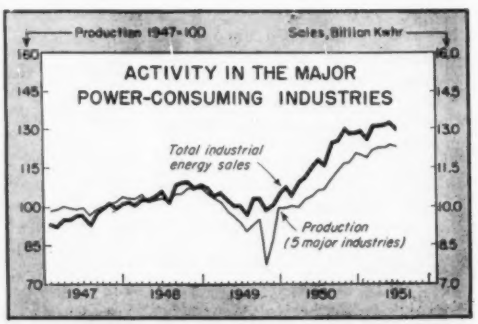
Lumber and furniture output is down sharply—and may stay in a slump as the government restricts new home building.

Stone, clay, and glass products are up, and will go higher. Glass is replacing steel and other scarce materials in many products. And all three items are used in industrial construction, which is booming.

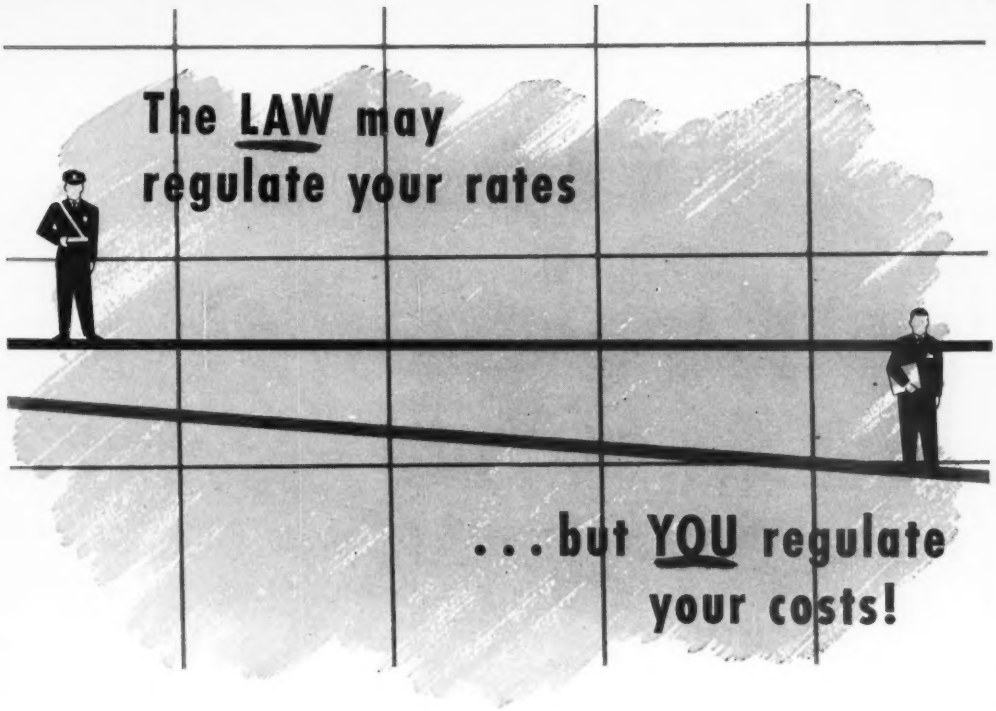
Auto production is declining gradually—materials cuts.

Electric appliance output is off more—because of poor retail business.

Machinery output has leveled out recently. But the No. 1 defense goal is to push it higher, get new factories equipped. This is where the biggest rise in industrial production will come.



JULY DROP in industrial output was steeper than usual. Consumer goods industries lacked orders, gave long vacations



MANY utilities today are operating at rates established when maintenance and equipment costs were much lower. As a result, greater emphasis is now being placed on the efficiency of transmission equipment in order to keep operating costs down.

Moloney Transformers, from the largest power transformers down to the smallest distribution transformers, are today proving their claim of efficient, dependable, economical operation. We believe, and many utilities agree, that you can't buy better transformers. Investigate and find out for yourself what we mean by dependable, economical, long operating life. MEM1-49

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TAP CHANGER

Operated Above Oil Level

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ALLIS-CHALMERS

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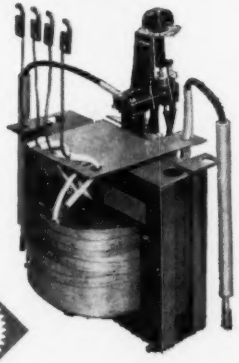
THIS NEW tap changer has its operating handle and indicating dial plate extended *above the hot oil level* for convenience in changing taps. It's easy to operate, easy to read and requires no maintenance. Attractive and compact, the design is based on the sturdy construction features that have given Allis-Chalmers tap changers top performance for many years.

Bold white letters mark tap positions on a black vulcanized fiber dial plate. Cautioning area indicates the location of limiting stops.

As the molded plastic assembly is turned, the high pressure contact snaps into position with a wiping action. The contact shoe is V-shaped so that it makes a positive stop in a position bridging two studs.

You can get Allis-Chalmers *new* long handled internally operated tap changer in distribution transformers rated 100 kva and smaller single phase; 150 kva and smaller three phase. For more information contact your local Allis-Chalmers sales office or write Allis-Chalmers, Milwaukee 1, Wis.

A-3439



Leads are firmly crimped to tap changer studs for a lifetime connection.

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